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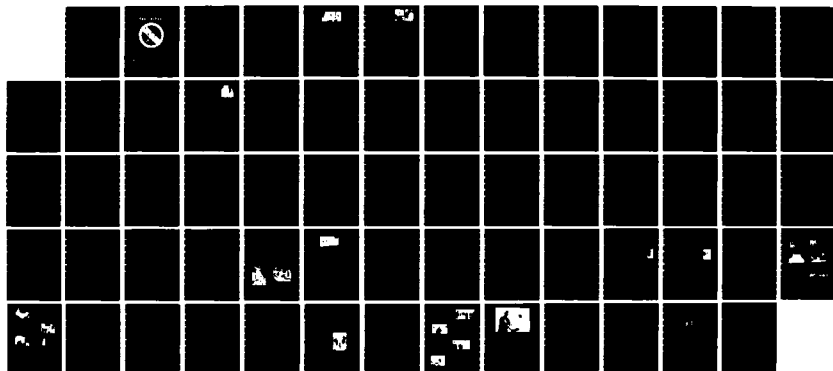
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NAVAL HEALTH RESEARCH CENTER SAN DIEGO CA 1983

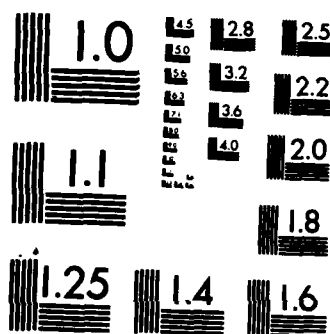
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NHRC REPORT



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NAVAL HEALTH RESEARCH CENTER

P. O. BOX 85122
SAN DIEGO, CALIFORNIA 92138

NAVAL MEDICAL RESEARCH AND DEVELOPMENT COMMAND
BETHESDA, MARYLAND

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Naval Health Research Center
San Diego, California

1983 Annual Report

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Organization



Captain J. E. Lang, MC, USN
Commanding Officer

Commander D. E. Wood, MSC, USN
Executive Officer

Commander E. J. Loos, MSC, USN
Administrative Officer

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From the Commanding Officer...

This Center's mission and functions were updated by NAVMEDCOMINST 5450.10 dated 14 October 1983 and are described, beginning on page 4. The Clinical Psychophysiology Department became the Behavioral Psychopharmacology Department on 5 December.

Effective 1 November new appointments were made as follows: Commander Ernest J. Loos, MSC, USN became the Administrative Officer; LCDR White continued the responsibilities of Head, Research Support Department; Chief Eveland was appointed Chief Petty Officer of the Command; and HMI Reyless became Head of the Operating Services Office.

On 1 September, Dr. Naitoh became Head of the Environmental Physiology Department vacated by the retirement of CDR Berghage. Dr. Laverne C. Johnson was reappointed Chief Scientist on 3 August to serve for three years. The scientific activities are reflected in the Chief Scientist's report and departmental reviews as 1983 report abstracts on pages 12 through 23 respectively.

Our monthly scientific colloquiums featuring presentations by distinguished visiting scientists and command staff are summarized on page 47.

Disestablishment of the Biological Sciences Department will be effective 30 September 1984. Personnel who have departed and still onboard are described on page 50.

Activities of the Commanding Officer

Attended the annual Surgeon General's Commanding Officers Conference held 1-7 May and the Naval Medical Research and Development Command CO's meeting that followed in Bethesda.

24 March I attended the Naval Training Center's tenants command briefing.

The morning of 1 April, I had the pleasure of attending the frocking ceremony for Captain William A. Ferris, MSC, USN, NHRC's Administrative Officer from October 1977 to February 1981.

By invitation, I was the Reviewing Officer for a Recruit Graduation at Naval Training Center, San Diego, the afternoon of 1 April.

I attended the 24-26 October Symposium on Computer Applications in Medical Care meetings in Baltimore, Maryland, with LCDR White, Dr. Gunderson, Bill Pugh and LCDR Congleton.

As a member of the Naval Biosciences Laboratory Board of Visitors, I joined the Board for the Annual Site Visit on 2-3 November held in Oakland, California.

Commissioning Ceremony

On 21 March, I had the pleasure of being the officer to swear in 2ND LT Pamela Sue Bostic, Air Force Reserve, appointed by The Secretary of the Air Force, for an indefinite term appointment as a Reserve Officer of the U. S. Air Force, to attend the Uniformed Services University of Health Sciences.



TAD and Reservists

LCDR Keith M. Zwingelberg, MC USN, Family Practice Resident from NRMCC Camp Pendleton was TAD to this command on a research rotation from 7 February to 3 April.

Two Reservists were assigned for ACDUTRA: LT Thomas R. Clancy, NC, USNR-R, of 3695 Cactus Ridge Court, San Diego, from 29 August to 9 September, and LCDR Nancy F. Ericksen, NC, USNR-R of the Naval and Marine Corps Reserve Center, Alameda, California, from 24 October to 4 November.

Postdoctoral and Senior Research Awards

Our two Postdoctoral Research Associateship students from the National Research Council, Dr. Lawrence Palinkas and Dr. Sharee Pepper, are in their final year of assignment to this command.

Location

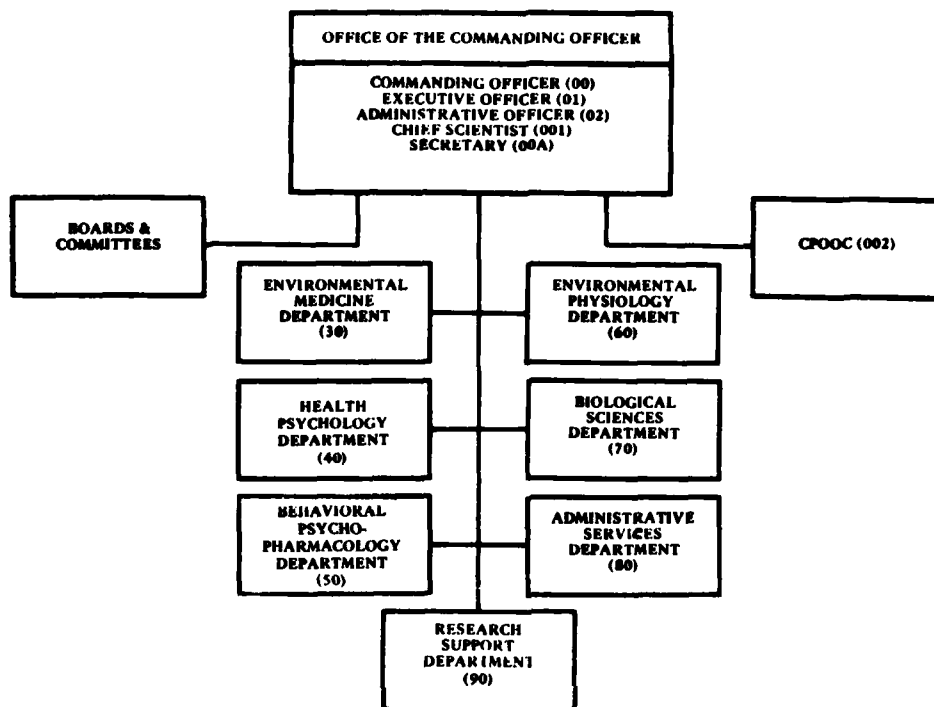
NHRC is located on Point Loma in San Diego and occupies, in tenant status, six of the Naval Ocean Systems Center's "barracks" buildings, and spaces at the Naval Hospital and Naval Training Center, as follows: [Phone numbers are provided for assistance in contacting a department.]

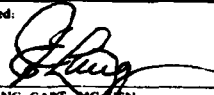
Bldg 306	(Top Deck) Office of the Commanding Officer Administrative Services Department, Code 80	(AV 933-) 225-2911
	(Bottom Deck) Walter L. Wilkins Biomedical Library	225-6640
Bldg 309	Research Support Department, Code 90	225-2005/2008
Bldg 331	Biological Sciences Department, Code 70	225-2071
Bldg 332	Environmental Medicine Department, Code 30	225-2061
Bldg 346	(Top Deck) Environmental Physiology Department, Code 60	225-7393/4
	(Bottom Deck) Health Psychology Department, Code 40	225-7395/6
Bldg 315	Performance Enhancement Program of Code 60	225-6671
NTC Bldg 272,	Physical Fitness Program of Code 60	(AV 957-) 225-4308/4379
Naval Hospital 36-4,	Behavioral Psychopharmacology Department, Code 50	(AV 987-) 233-2481

Retirements

Mrs. Ann Clay, Commander Thomas E. Berghage, MSC, USN and LCDR John C. Ferguson, MSC, USN retired in 1983. Retirements in 1984 include LCDR Daniel E. White, MSC, USN, on 1 June, and myself on 1 July.

J. E. LANG
Captain, Medical Corps, U. S. Navy
Commanding Officer



6 December 1983	Approved:  J. E. LANG, CAPT., MC USAF COMMANDING OFFICER	NAVAL MEDICAL RESEARCH & DEVELOPMENT COMMAND	NAVAL HEALTH RESEARCH CENTER Post Office Box 85122 SAN DIEGO, CALIFORNIA 92138-9174
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**Organization Manual for the Naval Health Research Center
Effective 14 October 1983**

ORGANIZATION AND MISSION

MISSION AND FUNCTIONS

The mission of the Naval Health Research Center (NHRC), as assigned by the Secretary of the Navy, and the functions to be performed to accomplish the mission, as assigned by the Commander, Naval Medical Command, are as follows:

MISSION. To support fleet operational readiness through research, development, test, and evaluation on the biomedical and psychological aspects of Navy and Marine Corps personnel health and performance, and to perform such other functions or tasks as may be directed by higher authority.

FUNCTIONS. As directed by the Commander, Naval Medical Command and exercised through the Commanding Officer, Naval Medical Research and Development Command, Bethesda, Maryland:

a. Conduct occupational health and safety studies in the Naval service to: identify environmental hazards in the workplace and aboard ship; assess the impact of potentially harmful agents or conditions on health and performance; determine causal factors in illness and accidents; and to develop cost-effective intervention strategies.

b. Maintain data files of medical and service history information for all naval personnel to: serve as the basis for longitudinal health studies on morbidity, disability, and mortality in relation to demographic, occupational, environmental, psychological, and service history variables; identify health and safety risks to naval personnel; and to assess the impact of chronic disease on performance and retention.

c. Conduct studies on the unique psychological, physiological, and environmental stresses which place demands on performance and biochemical homeostasis of Navy and Marine Corps personnel in operational environments; identify the physical, mental, and emotional requirements for maintenance and enhancement of performance during sustained military operations; and develop supportive programs for augmentation, restoration, and maintenance of physical fitness to enhance military job performance.

d. Conduct research to quantify the physiological and performance effects of occupational and environmental conditions, pharmacological agents, and certain clinical entities which may enhance or impair health and performance in operational settings.

e. Conduct studies on the epidemiology, rapid diagnosis, prevention, and control of infectious agents that adversely impact upon the health and performance of Naval service personnel.

f. Conduct studies of Naval health care facilities as complex organizations which must coordinate activities of professional and support personnel to provide health care and assess influences on the cost, quality, and effectiveness of health care provision in shipboard and shore facilities; develop information systems relating to Navy medical health care provision for management, clinical, and research purposes.

g. Develop biomedical engineering systems to: improve performance and physical fitness among Naval service personnel; augment the quality of health care onboard ship and within Naval shore facilities; and enhance casualty assistance and medical records management procedures in combat operations.

h. Provide effective liaison between Navy medical research and development efforts and WESTPAC Fleet and Marine Corps activities.

i. Provide or undertake such other appropriate functions as may be authorized or directed by higher authority.

EXTERNAL ORGANIZATION AND COMMAND RELATIONSHIPS

The Center is a tenant command of Naval Ocean Systems Center.

STATUS AND COMMAND RELATIONSHIPS

The Center is a shore (field) activity in an active operating status under a Commanding Officer, and under the command and support of the Commander, Naval Medical Command (COMNAVMEDCOM) exercised through the Commanding Officer, Naval Medical Research and Development Command, Bethesda, Maryland. The Center is under the area coordination authority of the Commander Naval Base, San Diego, California.

LOGISTIC SUPPORT

1. The Naval Ocean Systems Center (NOSC) provides direct logistic support to NHRC for functions of supply procurement, public works coordination, plant security and fire protection, civilian food service, printing services, safety program, and routine preventive maintenance for plant facilities.

2. Naval Hospital, San Diego, and Naval Medical Clinics, San Diego provide medical treatment.

3. Naval Regional Dental Center provides dental treatment.

4. Naval Training Center provides special services and military berthing.

5. Naval Submarine Base provides enlisted berthing and military food service.

6. Naval Supply Center provides civilian payroll services.

7. Civilian Personnel Office, Naval Hospital, San Diego, provides and administers civilian personnel functions and EEO program.

8. Personnel Support Detachment, Point Loma, provides travel, disbursing, and military personnel procedures.

9. Public Works Center provides maintenance and public works functions, transportation and building custodial services on a reimbursable basis.

10. Naval Legal Service Office, San Diego, provides command legal assistance.

OFFICE OF THE COMMANDING OFFICER

The Office of the Commanding Officer (OCO) consists of the Commanding Officer, Executive Officer, Administrative Officer, Chief Scientist, Chief Petty Officer of the Command, and Commanding Officer's Secretary.

COMMANDING OFFICER (CO)

The Commanding Officer (CO) is a Medical Department officer specifically assigned by the Commander, Naval Military Personnel Command. The CO is responsible for policy, direction, and coordination of all functions of the Center. Military command is executed from the CO to subordinates through established channels of seniority, procedure, and delegation of authority. The CO assumes such additional duty as assigned by the Commander, Naval Military Personnel Command and such temporary and collateral duties as may be assigned by higher authority.

EXECUTIVE OFFICER (01)

The Executive Officer (XO) serves as the direct representative of the CO. As such, all orders issued by him shall be regarded as proceeding from the CO and shall govern all persons within the command. While executing the orders of or serving in place of the CO, the XO shall take precedence over all other officers attached to the command. His primary function shall be to assist the CO in the discharge of his responsibility for the overall supervision of the quality and effectiveness of the command's research, in the formulation of professional policies, standards and directives, and in military and civilian personnel management.

The XO shall direct the Administrative Officer regarding matters of common interest and responsibility.

The XO coordinates the Center's interactions with other Naval Medical Command and Naval Medical Research and Development Command programs.

ADMINISTRATIVE OFFICER (02)

The Administrative Officer (AO) shall be responsible to the CO and XO for all administrative matters including the coordination of internal administration of the Center as well as management improvement functions. All orders of the AO shall be regarded as proceeding from the CO, whose orders and policies he shall conform to and effect. He shall advise the XO and the CO regarding management functions of the Center, and shall assist them in the formulation of administrative policies, standards, and directives. He acts independently upon matters which do not require the personal attention of the CO or the XO, and keeps the XO apprised of these actions. The AO shall exercise due caution to assure that all matters of a professional or research nature which may come to his attention are promptly referred to the XO. The AO shall be an officer of the Medical Service Corps.

The AO shall:

- a. Establish methods for improving operating procedures, solving administrative problems, and correcting unsatisfactory conditions of an administrative nature.
- b. Be responsible for the coordination and efficient operation of the Administrative Services Department.
- c. Maintain current information regarding laws, regulations, policies, and instructions pertaining to naval administration in general and to management of this Center in particular.
- d. Insure that all infractions of law or U.S. Navy Regulations and violations of discipline are promptly reported to the XO and the CO.
- e. Insure compliance with the provisions of U.S. Navy Instructions pertaining to the security of classified matter.
- f. Coordinate the activities of the Office of the Commanding Officer.
- g. Coordinate and manage the Center's Automated Data Processing Programs.
- h. Maintain liaison with the Naval Hospital, Naval Medical Clinics, Personnel Support Activity, Naval Training Center, and other commands as required.

CHIEF SCIENTIST (001)

The Chief Scientist (CS) is appointed by the CO from among permanent members of the Scientific Planning and Review Council (SPRC). Usual length of appointment will be three years.

The CS shall:

- a. Serve as the official representative for the SPRC in communicating with the CO and the command and, when appropriate, with higher authority, other military activities, and civilian agencies.
- b. Ensure that the SPRC responds to requests from the CO, higher authority, other military activities, and civilian agencies for information or action that falls within the Council's stated purpose and objectives.
- c. Under the guidance of the CO, coordinate the scientific research activity of the Center, and advise researchers as to timeliness, naval need, and requisite support available for the Center's research programs.

CHIEF PETTY OFFICER OF THE COMMAND (002)

The Chief Petty Officer of the Command (CPOOC) shall assist and advise the CO on matters pertaining to the enlisted staff and perform other duties as assigned.

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DEPARTMENTAL FUNCTIONS

ENVIRONMENTAL MEDICINE DEPARTMENT (CODE 30)

This Department conducts occupational health and safety research in the Naval service to identify environmental hazards in the work place and aboard ship, to assess the impact of potentially harmful agents or conditions on health and performance, to determine causal factors in illness and accident risks, and to develop cost-effective intervention strategies to prevent or control such health risks. The Department studies morbidity, disability, and mortality in relation to demographic, occupational, environmental, psychological, and service history variables and conducts long-term prospective studies of health risks in career personnel, including the impact of chronic disease on performance and retention. The Department determines incidence, course, and outcome of psychiatric and substance abuse conditions and devises improved diagnostic and prognostic guidelines for effective patient management. Other areas include development of an occupational health information system and communications network for management and research purposes and epidemiological studies to determine the etiology, course, and outcome of occupationally related diseases and injuries in Naval service. The Department designs and maintains files of medical and service history information for all naval personnel as a basis for epidemiological studies of morbidity and mortality in naval populations.

HEALTH PSYCHOLOGY DEPARTMENT (CODE 40)

The Health Psychology Department is concerned with the analysis of needs for and utilization of in-patient and out-patient health care services for active duty, dependent, and retired Naval personnel. The Department conducts research on naval health care facilities as complex organization which must coordinate activities of professional and support personnel to provide health care, and assesses influences on the cost, quality, and effectiveness of health care provision in shipboard and shore facilities. Additional areas of concern are the assessment and/or development and design

of information systems about health care provision within the Navy for management, clinical, and research purposes.

BEHAVIORAL PSYCHOPHARMACOLOGY DEPARTMENT (CODE 50)

Conducts research on the physiological, behavioral, and performance aspects of health, and physical and emotional fitness among Naval and Marine Corps service personnel. The Department's research will investigate both exogenous and endogenous factors which affect human performance, health and military effectiveness. The goal of this research is to quantify the physiological and performance effects of occupational/environmental conditions, pharmacological agents and certain clinical entities which may impair health and performance in operational settings. Areas of investigation include, but are not limited to, the behavioral effects of environmental toxins, the psychophysiological aspects of atypical work environments, the effects of pharmacological agents, both therapeutic and non-medicinal drugs, on performance, and the effects of disorders of arousal and sleep on personnel effectiveness.

ENVIRONMENTAL PHYSIOLOGY DEPARTMENT (CODE 60)

Investigates the unique demands placed upon Naval and Marine Corps personnel by their operational environments. Conducts research on psychological, physiological, and environmental stresses as they relate to human performance and impact on biochemical homeostasis. Essential to this work is the identification of the physical, mental and emotional requirements for successful performance during sustained military operations. Included in this research effort is the development of supportive programs for augmentation, restoration, and maintenance of physical fitness and health. Special emphasis is placed upon the implications of sex differences and aging for military job performance.

BIOLOGICAL SCIENCES DEPARTMENT (CODE 70)

This Department carries out studies on the epidemiology, prevention, and control of infectious diseases affecting the performance of naval personnel; investigates the biological aspects of Navy environments in relation to health of naval personnel; initiates and supports clinical investigations into the causes of infectious disease; initiates and supports studies on the effects of military training requirements on changes in biochemical, immunological, and microbiological parameters which influence health patterns; investigates the protective role of humoral and cell mediated immune response against microbial agents (searches for new etiological agents or infectious disease); develops new methods and techniques for microbial identification; develops rapid methods for identifying bacterial and viral agents, using immunochemical technology and validation through field studies; develops new methods in biochemical research relating to human performance; emphasizes the preventive medicine aspects of health through field studies of methods for early diagnosis leading toward modes for disease treatment and control; designs, develops, and tests instrumentation to bring rapid diagnostic techniques to the operating forces.

ADMINISTRATIVE SERVICES DEPARTMENT (CODE 80)

Provides overall administrative direction and support services to include but not limited to personnel management, facilities management, transportation service, financial management, plant account property control, supply services, library reference, and graphic arts service.

RESEARCH SUPPORT DEPARTMENT (CODE 90)

The Research Support Department provides hardware and software capability in support of the research departments of this command. The Department develops and automates methods of statistical analysis related to scientific research projects, develops research support software, and provides consultation to investigators.

STANDING BOARDS AND COMMITTEES

Functional statements for Boards and Committees are contained in directives which establish these bodies. All proceedings shall be made a matter of official record and submitted to the Commanding Officer.

a. Position Management Board (PMB)

To guide and assist management in the establishment of sound organization, design, staffing requirements and position structure necessary to carry out assigned tasks within constraints of costs and positive personnel practices.

b. Incentive Awards Board

To recommend policy and procedures for command Incentive Awards Program designed to improve Government operations and to motivate employees to increase productivity and creativity by rewarding those whose job performance and adopted ideas benefit the Government substantially above normal job requirements and performance standards.

c. Committee for the Protection of Human Subjects (CPHS)

Reviews all research proposals submitted by the command involving human subjects to determine that the risk to the subject is so outweighed by the sum of the benefits to the subject and the importance of the knowledge to be gained as to warrant a decision to allow the subject to accept these risks. Ensures that the rights and welfare of any such subject will be adequately protected.

d. Scientific Planning and Review Council (SPRC)

Advises and recommends to the CO on all scientific aspects including old, new, and projected scientific programs, as well as advising on all factors affecting the accomplishment of scientific goals.

e. Safety Committee

Conducts inspections for hazardous working conditions or materials and advises the CO on command safety matters.

f. ADP Committee

Reviews requests for ADP hardware and software. Evaluates the ADP needs of the Center to ensure efficiency of operations and prevent duplications.

PERSONNEL

(as of 31 December 1983)

MILITARY PERSONNEL

Medical Corps

Captain	
Internist (Hematologist)	1
Commander	
Psychiatrist	1
Lieutenant Commanders	
Internist	1
Psychiatrist/Physicist	1

Medical Service Corps

Commanders	
Microbiologist	1
Health Care Administrator	1
Biochemist	1
Lieutenant Commanders	
Health Care Administrator	1
Clinical Psychologist	1
Environmental Health Officer	1
Lieutenants	
Research Psychologist	1
Physiologist	2
Lieutenant (Junior Grade)	
Research Psychologist	1

Officers: 14

Enlisted

E-7	8425/8404	1
E-6	8506/8404	4
E-5	8506/0000	2
	0000/0000	2
	8454/0000	2
E-4	8454/0000	1
	0000/0000	2

Enlisted: 14

Total 28

CIVILIAN PERSONNEL

<u>Grade</u>	<u>Number</u>
SES	2
GM-14	2
GM-13	3
GS-12	9
GS-11	7
GS-9	13
GS-7	3
GS-6	5
GS-5	5
GS-4	2
WG-5	1

Total: 52

There are several officers with additional duty to NHRC to serve on the Committee for the Protection of Human Subjects. They include one each of:

Captain	- Medical Corps, USN
Commander	- Chaplain Corps, USN
Lieutenant JG	- Judge Advocate General Corps, USNR

WELCOME ABOARD TO**FAREWELL TO****Environmental Medicine Department, Code 30**

LCDR Frederic D. Glogower, MSC USN
Clinical Psychologist, 1 June
LCDR James C. Helmkamp, MSC USN, Environ-
mental Health Officer, 27 June
LCDR Michael W. Congleton, MC, USNR "
Psychiatrist, 13 June

Christine Colcord, Statistician,
resigned, 30 September
LT R. Blake Chaffee, MSC, USN, Clinical
Psychologist, transferred 1 June
LCDR John C. Ferguson, MSC, USN, retired
30 June
Doug Kolb, Research Psychologist, re-
sign 19 August

Health Psychology Department, Code 40

Dr. George Seymour, Research Psychologist,
(Temp), 3 June
Leila Attar, Health System Specialist
(Temp), 3 June
Stacy Hrountas, Health System Specialist
(Temp), 3 June

LT Marie T. Wallick, MSC, USN, trans-
ferred 1 August
Dr. Seymour (Temp appt) 30 September
Susan Ramras (Temp appt) 30 September
Ms. Attar (Temp appt) 30 September
Ms. Hrountas (Temp appt) 30 September
LCDR Mark C. Butler, MSC, USN, trans-
ferred, 30 September

Behavioral Psychopharmacology (Clinical Psychophysiology) Department, Code 50

Trinidad M. Pastor, Editorial Assistant
(Typing), 5 July
LTJG Schuyler C. Webb, MSC, USNR, Psychologist,
22 July

Ann Clay, Editorial Assistant (Typing),
retired, 11 March

Environmental Physiology Department, Code 60

HM2 Nilda P. Laganzon, Gen. Duty Corpsman, 5 February
HN Kathleen A. Khoury, Gen. Duty Corpsman, 6 April
LT Michael R. Lawlor, MSC, USNR, Physiologist,
23 May
LT Ronald P. Crisman, MSC USNR, Physiologist, 25 May
HM2 Timothy E. Niver, EEG Technician, 3 January
HN Tracye L. Miner, Gen. Duty Corpsman, 27 June
HM2 Paul H. McCormic, Gen. Duty Corpsman, 28 July
HM2 Joseph F. Burkard, Lab Technician, 21 October

HM3 Rebecca A. Johnson, Gen. Duty Corps-
man, RAD, 4 April
HM3 James Bucci, Gen. Duty Corpsman,
transferred, 7 July
CDR Thomas E. Berghage, MSC, USN, Psy-
chologist, retired, 1 September

Administrative Services Department, Code 80

"Becki" Knight, Clerk-Typist, 8 August
CDR Ernest J. Loos, MSC, USN, Health
Care Administrator, 17 October

HM3 Sandra Weber, Gen. Duty Corpsman,
transferred 28 February
Christine Chappell, Clerk-Typist, trans-
ferred, 5 August
HMCS Collins C. Milhouse, SCPOC, trans-
ferred, 28 October
Enid Cyphert, Library Technician,
resigned, 23 November

Research Support Department, Code 90

Billie J. Wright, Computer Clerk, 12 September
Prima Fontanares, Computer Clerk, 17 October

Joyce Ford, Computer Aide, resigned,
1 April
Victoria M. Moseley, Computer Aid,
resigned, 8 July
Rena Paczowski, Computer Aid, resigned
2 December

Biological Sciences Department, Code 70

Sandra Stevenson, Secretary (Typing), 31 October

* CDR Michael Kilpatrick, MC, USN, Intern-
al Medicine, transferred, 7 January
HMC Manuel G. Abroguena, Lab Technician,
transferred, 7 July
William C. Suiter, Microbiologist,
transferred, 8 July
Patricia A. Yelenosky, Chemist, resigned
5 August
LCDR Eric J. Mueller, MSC, USN, Micro-
biologist, transferred 31 August
Hope D. Chappell, Secretary (Typing),
leave of absence, 1 September
Charmion P. McMillan, Biology Lab Tech-
nician transferred, 21 October

<* Farewells for Code 70, see page 50>

SCIENTIFIC ACTIVITIES

Chief Scientist's Report

Last year I outlined the major areas of research at NHRC namely 1) performance enhancement, 2) occupational and environmental health, 3) rapid identification of infectious diseases and 4) health psychology. During 1983, we have continued work in each of these areas and the 1983 publications and presentations attest to the continued productivity of our research staff. In the 1982 report, each Department Head presented an overview of his/her Department. This year instead of extensive summaries, each Department's accomplishments are reflected in the abstracts of 1983 publications with only a brief introduction by the Department Head. While publications are our most tangible product, each Department contributes significantly to Naval commands through formal and informal briefings and to the scientific community through presentations at scientific meetings. These briefings and presentations begin on page 33.



L. C. Johnson, Ph.D.
Chief Scientist

I will also not dwell on previously published work that you either have already read, or as one of my professors used to tell his students, the truly interested and motivated will secure the articles of interest. I want to briefly note what has not been published and what you may be reading in our 1984 reports.

First, I report with regret that 1984 will be the final year of our infectious disease research program. Mr. Earl Edwards, Head of this Department, is retiring and the resources of his Department will be transferred to other commands. Mr. Edwards joined the NHRC staff in July 1974, after transferring his program from Great Lakes. Compared to Great Lakes, San Diego is a desert with respect to both climate and infectious disease research. The climate has varied slightly from year to year, but Mr. Edwards' program has flourished and his work and success in rapid identification of infectious diseases earned him and his program national and international recognition. The command resisted termination of Earl's program, but in the era of limited resources, of both funds and personnel, we accepted the reality of change.

As this program terminates, a new area of interest emerges. For some years, research on the effects of benzodiazepines on electrophysiology and performance has contributed to knowledge as to how sedative hypnotics effect sleep, the EEG during sleep and daytime behavior. The use of pharmacological techniques to sustain performance and as prophylactic agents for chemical and biological warfare agents is receiving increased attention. In the Falkland combat, precedent setting permission was given to flight crews for ad-lib use of a sedative hypnotic to insure adequate sleep during sustained flight operations. To reflect the Center's interest in the behavioral effects of various types of drugs and to more accurately reflect the research done, the name of the Clinical Psychophysiology Department has been changed to Behavioral Psychopharmacology Department.

With the proliferation of computers, has come an expansion of automated information systems. Anticipating the need for automated data in the occupational health field, NHRC began development of the Navy Occupational Health Information Management Systems (NOHIMS) in 1981. Already in use as a

pilot system at the local Naval Air Rework Facility and at Bremerton Naval Shipyard, test systems will be available for other sites by late summer of 1984.

As NOHIMS is deployed, work is beginning on an automated medical information system for combat forces. To coordinate our efforts a tri-service workshop will be held in San Diego this April to share ideas and plan research on how to automate medical data under field conditions.

In 1984, reports will be issued that will have a direct impact on Navy policies and procedures. Our first '84 report entitled "Analysis of Baseline Navy Health and Physical Readiness" by Dr. D. Stephen Nice, Linda Dutton and Dr. George E. Seymour provides important information on the performance of Naval personnel on the fitness tests required under OPNAVINST 6110.1B. Twenty-two percent of the over 6,000 persons tested in our study sample failed to meet standards set by the Instruction. Staff of the Health Psychology and Environmental Physiology Departments will continue to monitor the effects of this Instruction on organization and personal effectiveness as well as the program's impact on life styles.

For some years, NMRDC has supported research by the bioengineering staff at the Naval Ocean Systems Command for development of a remote medical diagnostic system (RMDS) for shipboard use. A primary function of RMDS would be to reduce the need for medical evacuations. To ascertain the current need for RMDS, NHRC was tasked to determine the incidence of medical evacuations and whether RMDS would reduce this number and/or meet other shipboard medical needs. Briefings on our findings are being presented in January and February and a final report will be published by Summer 1984. Over a 9-month period, data were obtained from all Naval ships with medical personnel aboard. In addition to documenting 743 medical evacuations, for the first time data are now available in one report on number of patient visits, types of complaints, medical staff and medical equipment aboard the various classes of ships, and the pattern of sick bay visits over a deployment. The study was motivated by the question as to whether RMDS should be deployed. Our data will help in this decision, but beyond that question, medical planners have for their use detailed information on the practice of shipboard medicine.

The above is just a glimpse into the plans we have for 1984.

Department: **Health Psychology**

Head: **D. Stephen Nice, Ph.D.**

During this calendar year, the Department has undertaken major new data collection efforts. These projects include a nine-month survey of all shipboard medical communications and evacuations

in the Navy, the development of baseline criteria for Health and Physical Readiness performance on 6,182 Navy personnel, and the initiation of a study of shipboard Independent Duty Corpsmen. The products of these efforts will be reflected next year. The current reports represent our work in the areas of health and performance in Marine Corps basic training, hospital information systems, and organizational factors in health care delivery.

83-25 Dutton, LJ & DS Nice Work Unit # M0106.PN.001-0002
Hospital Information Systems for Clinical and Research Applications: A Survey of the Issues
<Center Publication, AD# A137-280>

Abstract: Comprehensive, high quality health care requires that providers and managers relate all relevant medical knowledge to the needs of individuals in the broadest possible context and in the most coordinated manner possible. Computerized information systems afford powerful means for meeting medical information processing needs. The present report is designed to focus attention of both clinicians and researchers on the salient issues involved in the design and use of an automated medical information system. The literature describing the current state of the art of computer applications in medicine is reviewed, with special emphasis given to (a) clinical (as opposed to administrative) applications of health care systems, (b) assessment of information needs and research issues and, (c) design and implementation issues, including methods of data capture, database security, and costs. The report concludes with a brief examination of future directions and policy recommendations for medical information systems.

83-1 Butler, MC & PT Bruder Work Unit # M0106.PN.001-0002
Organizational and Career Orientations Among Military Health Care Professionals

Abstract: The present study described the career planning, commitment, and involvement orientations of military health professionals (N=1,384). Efforts were made to (a) validate measures of career orientation and commitment and (b) investigate differences in career orientation and commitment as a function of health care occupation and career stage. MANOVA results indicated that mean levels bureaucratic role orientation, career involvement, and organizational commitment varied by occupational category and career stage level. Implications are discussed in terms of the need to identify specific variables which facilitate career decision-making and planning within career stages.

83-15 Hilton, TF, MC Butler & DS Nice Work Unit # M0106-PN.001-0002
Differences in Patient and Provider Assessments of Satisfaction Associated with Treatment
Modality <Center Publication, AD# A132-703>

Abstract: Differences between family practice and nonfamily practice health care service delivery have been characterized in terms of patient satisfaction. Since health care providers guide their behaviors on the basis of conceptions of what is satisfying for patients, a clarification of the degree of congruence between patient self-reports and provider impressions seemed appropriate. Responses to four patient satisfaction measures were obtained from 136 providers and 1,735 patient in both family practice and nonfamily practice locations. Results of separate mul-

multiple discriminant analyses conducted between settings for both provider and patient groups indicated that providers emphasized trust and range of services as hallmarks of family oriented care. Patients, alternatively, emphasized accessibility of services, while range of services was not relevant to differentiating between treatment modalities.

83-28 Hilton, TF; MC Butler & JR Bruni, Jr. Work Unit # M0106-PN.001-0002
Employee Self-Esteem: An Empirical and Theoretical Clarification

Abstract: Research into organizational effectiveness and productivity relative to the quality of work life has left the role of employee self-esteem unclear. A strategy is demonstrated which clarifies theoretical, definitional, and measurement issues that have lead to conflicting findings. The self-report data of 160 Navy enlisted health care providers were examined. Analyses showed that organizational frame of reference (proximal-distal) was consistently related to self-esteem when a state versus trait distinction was made. Mean differences and correlational data exhibited a pattern consistent with the notion that trait self-esteem is related to distal work environment variables, although work-related state esteem is more strongly related to proximal variables. Implications for organizational effectiveness and productivity are briefly discussed.

83-7 Vickers, Jr., RR & TL Conway Work Unit # M0096-PN001-1035
The Marine Corps Basic Training Experience: Psychosocial Predictors of Performance, Health, and Attrition <Center Publication, AD# A133-859>

Abstract: This report describes one study in a series assessing the effects of Marine Corps basic training (BT) stresses on male recruits. The present study was undertaken to identify individual differences important for evaluating BT stress effects on performance, health, and attrition. Measures of 18 social background variables, 20 coping and defense mechanisms, 11 motivational variables, GCT, age, and race were obtained from 2,648 recruits.

Results were: (a) GCT was the primary predictor of performance. Race, chance locus of control, high school grades, and repeating a school year were secondary predictors. (b) Health was not strongly related to any individual difference measure. (c) BT attrition was related to suppression, displacement, expected success in completing the first term enlistment, GCT, and age. (d) Recruits with psychosocial profiles similar to those which predicted BT attrition were less successful in the FME. (e) FME attrition was also associated with less education and more expulsion from school.

Displacement, suppression, enlistment expectations, age, and GCT scores represent the minimum set of individual differences important for accurate assessment of BT stress effects. In general, Marine Corps attrition was linked to personality characteristics indicative of limited ability to adapt to stress and a behavioral history suggesting mild social delinquency.

83-37 Vickers, Jr., RR Work Unit # M0096-PN.001-1035
Side Effects of Physical Training: Association of Fitness Improvement to Esprit de Corps, Performance, Health, and Attrition in Marine Corps Basic Training

Abstract: Physical training (PT) is a significant element of Marine Corps basic training (BT) which may affect nonfitness BT outcomes in addition to improving fitness. If so, PT side effects should be considered when designing and evaluating PT programs.

This study capitalized on naturally occurring platoon differences in fitness outcomes to classify BT platoons into relatively low and high improvement groups. The high improvement group had better attitudes toward the Marine Corps, greater perceived self-improvement, and performed

better during BT. The groups had comparable illness rates during BT, but there was more medical attrition and overall attrition in the high improvement group. The groups did not differ with regard to Fleet Marine Force promotion or attrition rates.

These findings demonstrate that PT programs may indeed influence non-fitness BT outcomes. Additional research is needed to verify that PT differences actually cause non-fitness BT outcomes, to determine whether these side effects are large enough to be of practical importance, and to identify specific aspects of PT programs that are important for promoting non-fitness BT objectives.

Department: **Behavioral Psychopharmacology**
Deputy Head: Cheryl L. Spinweber, Ph.D.

As mentioned in the Chief Scientist's report, during 1983, we changed our name to the "Behavioral Psychopharmacology Department" (formerly, the "Clinical Psychophysiology Department") to reflect more accurately our current research on sleeping aids and the expansion of our interests to development of other psychopharmacological techniques to enhance human performance. Currently, we are continuing our laboratory evaluation of the operational significance of side effects associated with administration of the short-acting benzodiazepine triazolam (Halcion), including the drug-induced alteration in arousability from sleep and its adverse effects on memory. In our on-going study, we ask whether medicated sleepers can respond to a smoke detector alarm, and how and when the memory system is affected by triazolam use. Next year, our laboratory work will focus on preliminary evaluation of the effects of xanthine stimulants, such as caffeine, on performance, and we will also begin field studies to assess psychopharmacological strategies to minimize jet lag in troops airlifted across multiple time zones.

The 1983 publications present an integration of results of our previous research studies on various sleeping aids--the long-acting benzodiazepine flurazepam (Dalmane), triazolam, and a dietary constituent, the amino acid l-tryptophan. These papers were presented to international audiences, reflecting the widespread attention and interest our work receives. The NATO paper provided the basis for a recently submitted NMRDC Exploratory Development Technology option which, if approved, will establish our program in behavioral psychopharmacology as a major research area for the Navy.

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83-11 Spinweber, CL & LC Johnson Work Unit #s MR00001.01-6018 & MR01.01.003-0157
Psychopharmacological Techniques for Optimizing Human Performance
Proceedings of the NATO 14th Defense Research Group Seminar, The Human as a Limiting Element in Military Systems, Vol. 1. Canada: Toronto, 2-4 May 1983. pp 139-157
<Center Publication, AD# A129-98>

Abstract: In operational environments, administration of psychopharmacological agents could be employed to optimize and maintain human performance. One technique of considerable military importance is use of sleeping aids to promote rapid sleep onset and permit efficient utilization of rest periods. A methodology for evaluation of sleeping aids for military use is described. In laboratory study of the triazolobenzodiazepine triazolam 0.5 mg, sleep latency was reduced and morning performance was unimpaired, although a clear performance decrement was present up to 5 hours post-administration. Triazolam also produced anterograde amnesia and elevated auditory threshold for arousal from sleep. In operational use, triazolam could be effectively administered when rest periods of 8 hours duration are scheduled. The dietary amino acid l-tryptophan 4 g was effective in

reducing daytime sleep latency in normal sleepers, suggesting its usefulness in alleviating sleep disturbances associated with jet lag and altered work-rest schedules. In nighttime administration to chronic poor sleepers, 1-tryptophan 3 g reduced sleep latency after three nights of administration and had no adverse performance effects. The suitability of both triazolam and 1-tryptophan for military use will be further evaluated in field research and tested in operational environments. Another psychopharmacological approach to be explored involves administration of carefully-chosen stimulants to maintain alertness and performance effectiveness when there is no opportunity for sleep. The techniques developed in this ongoing research program in behavioral psychopharmacology will be employed to evaluate stimulants for operational use.

83-17 Johnson, LC & CL Spinweber Work Unit # MR01.01-003-0157
Benzodiazepine Effects on Arousal Threshold During Sleep
Proceedings of the Fourth International Congress, Noise as a Public Health Problem, Turin, Italy, 21-25 June 1983. <Center Publication, AD# A133-151>

Abstract: Noise is often the reason given for poor sleep, and sedative hypnotics are frequently used to insure "deeper" sleep and fewer awakenings. In a series of studies, the effects of benzodiazepines on arousal threshold during sleep have been investigated. Two studies, one using flurazepam, 30 mg, over 10 nights and one using triazolam, .5 mg, over 6 nights, were conducted in the authors' laboratory. A third study at the University of Florida measured the effects of flurazepam, 30 mg, and pentobarbital, 100 mg, each administered on two nights. All drug threshold levels were compared to placebo values.

All three studies found that the sedative hypnotics increased arousal threshold to an intermittent pure tone. The placebo groups' highest mean arousal threshold was 70-75dB, compared to 100-110dB threshold values for the hypnotic group. The increase in arousal threshold occurred during the first hours of sleep, reaching a peak around 120-150 minutes post-ingestion. Return to sleep was also more rapid in medicated subjects, and the reduction in sleep latency followed the same time course as did the change in arousal threshold. Arousal threshold and sleep latency did not differ between drug and placebo groups after 3 hours post-administration.

The short acting benzodiazepine, triazolam, and flurazepam, with its long acting metabolite, did not differ in the magnitude of the elevation of arousal threshold, time course of effects across the night, or type of change over nights of consecutive use.

Department: Biological Sciences
Head: Earl Edwards

There have been three major programs in the Biological Sciences Department, all focusing on rapid identification technology.

The Virology Section continued its monoclonal antibody production interests with hybridoma antibody producing cell lines making antibody against 6 different antigens. Of particular interest was a cell line producing an antibody which appears to be specific for factor 5 of S. typhimurium. Other monoclonal antibody producing hybridomas are producing antibody against group A streptococci, Bacteroides, a snake venom, adenovirus, (vaccine strain of type 4), and a wild strain of adeno type 4. An indirect COAG test (Protein A Staph aureus) has been developed which has expanded the potential use of the COAG test for antigen detection. The monoclonal antibody production effort was developed to improve the "State of the

Art" for rapid identification of microbial antigens directly from body secretions (urine, blood serum, sputum, wounds, etc.).

The Biochemistry Section has concentrated on studying the affinity of antibody and its role in sensitive antigen detection systems. A computer model has been developed showing the relationship between antibody affinity and antigen detection. Two new methods for the determination of antigen-antibody affinity constants from dilution data have been developed for homogeneous and heterogeneous antibodies. A laboratory model antigen-antibody system, namely, S. typhimurium antigen and specific antibody, is being tested to determine if this in-vitro model will correlate with the computer model. Preliminary data suggest a direct relationship between antibody affinity and test sensitivity.

The Immunobiology Section has completed its studies on comparing covalent linking of antibody to solid supports vs physical absorption (hydrophobic binding) as a method for antigen capturing. The section also conducted a field study on detecting streptococcal antigens directly from throat swabs from a pediatric population. Results were obtained in less than one hour. Three different commercially available sensitized latex or staphylococci were compared for sensitivity and specificity. Ninety-seven percent of the throat swabs were positive by the latex or coagulation test within an hour when compared to the conventional culturing technique, which takes 8 hours or longer to complete. Also, a COAG test to rapidly identify Bacteroides fragiles from culture was developed. This test procedure took only 5 minutes to complete compared to the more laborious fluorescent antibody technique which takes several hours to complete.

83-19 Edwards, EA; P Yelenosky & IA Phillips Work Unit # Army 3M162770A871.AB.306
The Derivatization of Polystyrene and Nylon Beads. A Controlled Introduction of Functional Groups for Immobilization of Antibody Protein <Center Publication, AD# A131-170>

Abstract: An attempt was made to "modify" the surface properties of nylon balls and polystyrene tubes so that antibody protein could be covalently attached. Using ¹²⁵I labeled antibody as our probe to quantitate the amount of protein "bound" to the solid support, the "modified" solid supports immobilized from 2-5 times more antibody than the non-modified supports. Also, our data show that glutaraldehyde was 2-4 times more effective than carbodiimide as a coupling reagent for antibody immobilization. It is apparent that receptors for antibody protein on either the modified or unmodified supports remain "free" or "unbound" at every level of antibody protein concentration used to sensitize the supports, which in practice, permits "nonspecific" uptake of other protein molecules subsequently used in reaction identification. This causes difficulty in test interpretation. Work is in progress to determine if the "unbound" receptor sites can be effectively blocked without reducing the immunoreactivity of the immobilized antibody.

83-3 Phillips, IA Work Unit # Army 3M162770A871.AB.306
A Modified Diffusion in GEL-Enzyme Linked Immunosorbent Assay (DIG-ELISA) for Quantitation of Specific Antibody <Center Publication, AD# A126-30>

Abstract: A method was developed to quantify specific antibody by immobilizing an antigen in an agar film. In our model system, adenovirus types 4 and 7 in 1% agar was allowed to dry to a thin film in 15 x 60 mm plastic tissue culture dishes. This antigen containing "film" was used to "capture" specific antibody. Specific antiserum was allowed to diffuse from wells in a gel layered over the antigen containing agar film. After the antibody had diffused, the agar layer was removed

and alkaline phosphate conjugated anti rabbit serum was layered over the plate. After incubation, this was removed and the plate was layered with a substrate containing agarose. Within 5 minutes, zones of reactivity were visualized with the aid of oblique light. The method proved to be sensitive and end points could be accurately identified with the naked eye.

83-20 Mueller, EJ Work Unit # Army 3M162770A871.AB.306
Coagglutination Reagent for the Rapid Presumptive Identification of Bacteroides fragilis
<Center Publication, AD# A133-307>

Abstract: A coagglutination test for presumptively identifying Bacteroides fragilis is described. The test utilized protein A-containing staphylococci sensitized with specific antibody to rapidly identify suspensions of B. fragilis. Sensitization with 200 µg antiserum/ml 10% staphylococci produced a coagglutination reagent which exhibited specificity and sensitivity adequate for slide testing of colonies from primary cultures. The use of coagglutination for presumptive identification of bacteria is simple and reliable, requiring a minimum of training and equipment. Large numbers of colonies can be screened and subcultured for further testing if desired. Although coagglutination does not have the sensitivity of other test methods it provides results within 3 minutes.

83-5 Nelson, DP & LD Homer Work Unit Army 3M162770A871.AB.306
Non-Linear Regression Analysis: A General Program for Data Modeling using Personal
Microcomputers <Center Publication, AD# A126-80>

Abstract: This report documents a general non-linear regression program for fitting data to non-linear models. The program is based on an algorithm by Marquardt which uses a least squares criterion to calculate successive improvements to an initial set of parameter estimates. The program is written in the BASIC language common to most microcomputers, because it is easy to use and to transport between machines from different manufacturers. The majority of inexpensive microcomputers do not offer matrix operations as part of their BASIC interpreter. The program presented here, therefore, supplies subroutines in BASIC for the zeroing, transposing and inverting of the required matrices, to make it compatible with most microcomputer is available today. The report gives examples and program output based on a demonstration data set involving antigen-antibody complexation in solution. Two derivations of function subroutines are given to assist the user in designing his own function subroutines. A complete listing of the necessary programs is given along with a section on program cautions.

83-23 Griswold, WR & DP Nelson Work Unit # Army 3M162770A871.AB.306
Computer Simulation of Plasma Exchange Therapy in Autoimmune Disease
International Journal of Bio-Medical Computing, (in press)

Abstract: Computer simulation of plasma exchange in autoimmune disease shows that a single treatment may reduce the amount of antibody bound to antigen by as much as 60-80%. The reduction is greatest when autoantibody is of low affinity and there is an excess of antibody compared to antigen.

83-26 Griswold, WR & DP Nelson Work Unit # Army 3M162770A871.AB.306
Theoretical Analysis of the Farr Antibody Assay with a Computer Model: Importance of Anti-
gen Concentration and Antibody Affinity
Journal of Immunoassay, (in press)

Abstract: The Farr assay for antibody was analyzed theoretically in order to determine the maximum sensitivity of the assay, the quantitative relationship between actual antibody concentration

83-29 Griswold, WR & DP Nelson Work Unit # Army 3M162770A871.AB.306
A Rapid Method for the Determination of Antibody Affinity
Immunology Letters (in press)

Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

In the Cognitive Performance Program we are studying the effects of physical workload and sleep loss on physical and cognitive performance during continuous work periods. Effectiveness of short sleep (3 hours) as an intervention technique for maintaining and perhaps enhancing cognitive performance during Sustained Operation (SUSOP) is also being examined. Efficacy of short sleep as an intervention technique is also being evaluated by a computer-administered psychological performance battery. Our interest in the impact of environmental extremes on performance was supported by collaborative research with the University of Victoria, B.C, Canada. In this collaborative study changes in cognitive performance under wet/cold exposure in a field situation were examined.

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testinal physiology in the pig under various levels of exercise is a new area of basic research. Neurometrics, the use of cortical event related potentials to select skill personnel such as sonar operations is in its first year.

Abstract: OPNAV Instruction 6110.1B changes the Navy's standards for weight control from height/weight tables to a 22% body fat (%BF) standard for men, estimated from neck and abdominal circumferences. In order to determine the possible impact of this change, height, weight, age, neck circumference and abdominal circumference measures were collected on a sample of 986 male U.S. Navy personnel. Percent body fat was determined according to OPNAVINST 6110.1B and compliance with height/weight standards was assessed using a table in OPNAVINST 6110.1B. Adjusting for differences between age distribution of our sample and the total Navy male population, it is estimated that 15.8% (+1.) of the Navy male population will exceed the 22% BF standard. In our sample, 16.5% exceeded the BF standard and 15% exceeded the height/weight standards. Therefore changing to the %BF standard will not greatly affect the number of personnel on weight control programs. In our sample, 35.6% of personnel who exceeded the height/weight standards do not exceed the 22% fat standard. Of those meeting the height/weight standards 7.8% will exceed 22% BF. Our sample indicated that the change to %BF standards can be expected to impact more heavily on the Navy's senior personnel.

Abstract: Results of the present study indicate that the present physical conditioning program for Navy recruits is not well-suited to meet training objectives of developing total body fitness. Simply increasing the intensity of the current running/calisthenic format improves stamina but not upper torso muscular strength. It is advised that to provide a more all-around fitness enhancement program for recruits, current training methods need to be restructured. It is suggested that to better align recruit physical capabilities with shipboard work requirements, calisthenic conditioning be replaced with a more effective mode of training upper torso muscular strength.

Abstract: Data obtained under laboratory conditions have led to the "distraction" hypothesis of cold-related cognitive performance changes. To test this hypothesis in a wet-cold field situation, 30 volunteers each completed a 6-hr hike in ambient temperatures ranging from -1.5 to 9.5 degrees C. Core temperature, skin temperature and oxygen consumption were monitored continuously. VO max, body surface, mean skinfold, height and weight were obtained prior to the hike. Cognitive performance was measured at 1-hr intervals and included the Baddeley Reasoning, Coding, Number Comparison, and Tapping tests. Results indicated that core temperature changes do not correlate with cognitive performance changes, further, skin temperature change did not correlate with cognitive performance change. The "distraction" hypothesis was not supported. Anecdotal information obtained while running subjects, indicated that cognitive performance changes in wet-cold are related to personality attributes associated with attention or coping.

83-6 Englund, CE; P Naitoh, DH Ryman & JA Hodgdon Work Unit # MF58.528.01B-0003
Moderate Physical Work Effects on Performance and Mood during Sustained Operations
<Center Publication, AD# A129-532>

Abstract: During military operations humans must work for long hours at physically demanding tasks while remaining mentally alert. In our study, 11 pairs (one experimental and one control) of Marines (N=22) experienced one 12-hour baseline and two 20-hour continuous work episodes (CWE). CWEs were separated by five hours which included a three-hour nap from 0400-0700. In each hour of CWE, the first half-hour involved performance alpha-numeric (A-N) visual vigilance tasks. The experimental member of each pair spent this first 30 minutes also walking on a treadmill in full combat gear (25 kg) at approximately 31 percent max VO heart rate. The controls performed the A-N task while sitting quietly at a CKT terminal. During the second half-hour, all subjects completed mood and fatigue scales and performed selected combinations of tasks. From a comparison with our previous nap studies we were able to conclude: (a) the timing and duration of the nap are important in determining recuperative value, and (b) when designing work/rest schedules to maintain high quality performance in recurring CWEs as short as 20 hours, a three-hour or longer nap during the circadian nadir may be required

83-13 Naitoh, P; CE Englund & CH Ryman Work Unit # MF58.528.01B-0003
Extending Human Effectiveness during Sustained Operations Through Sleep Management
<Center Publication, AD# A13-782>

Many operations involve continuous work (CW) for extended periods of time. Recovery from the fatigue and sleepiness incurred by persons in CW is usually accomplished by naps before embarking on another episode of CW. Previous studies have shown that naps have a restorative effect on task performance, mood and motivation for work. However, no serious attempts have been made to evaluate logistics implication of naps to counteract the operational consequences of sleep deprivation on combat effectiveness. Using data obtained from 7 U.S. Marine volunteer subjects in a series of sustained operation (SUSOP) research, sleep logistics or sleep management, i.e., adequate planning for time and place for sleep, is proposed to be as important as logistics for food, equipment, transportation and housing. Recent laboratory and field studies are analyzed to support the proposal to link sleep logistics with extending the time range of human effectiveness in SUSOPs. The purpose of sleep logistics has been described to be the most effective management of human resources in combat through development of sleep discipline. A further extension of sleep logistics with a computer modeling of performance in SUSOPs is discussed.

83-21 Ryman, DH; P Naitoh & CE Englund Work Unit # MF58.528.01B-0003
Minicomputer Administered Tasks in the Study of Effects of Sustained Work on Human Performance <Center Publication, AD# A133-870>

Abstract: Computer administration of tasks during laboratory studies of human performance changes in continuous work has made data collection and analysis easier and quicker. Six tasks and scoring programs were developed for the MINC 11 (Digital Equipment Corporation's Modular Instrumentation Computer) with an A/D converter and a clock module. Four of these tasks measured different types of reaction time; the TRAP task measured the response times of alternate pressing of two buttons, the Simple Reaction Time task recorded response times to a visual stimulus, the Alpha-Numeric Visual Vigilance task measured response latencies to correct and incorrect (disjunctive) visual signal detections, the Four Choice Serial Reaction Time task measured reaction time involving

ing correctness of choice to a visual stimulus in one of four areas on a terminal screen. Two other tasks presented via computer were the Logical Reasoning Task, measuring correctness of complex information processing, and a Mood-Symptom-Fatigue and physiological state survey.

The task programs were written in assembly language (MACRO-11), and the scoring programs in Fortran IV. The programs have been run on a MINC-11/03 and 11/23 computers, with two double-density disk drives, two terminals and a printer.

83-12 Gray, CG

Work Unit # M0099-PN.001-1157

A Retrospective Evaluation of Oxygen Recompression Procedures Within the U.S. Navy
<Center Publication, AD# A129-533>

Abstract: Recompression procedures for Treatment of decompression sickness (DCS) and arterial gas embolism (AE) have undergone considerable evolution over the past 20 years. Since an evaluation of U.S. Navy hyperbaric facilities treatments has not been conducted since 1970, a retrospective survey was performed to assess usage of the treatment tables and therapeutic results. Evaluations were based on treatment criteria when the treatments were administered and on the accident/injury reports for each treatment.

Cases involving DCS and AE from 1971 to 1981 were reviewed. From 1971 to 1978 there were 77 cases treated on oxygen tables, with 33 retreatments (R) and three fatalities, a 92.5% one-treatment success. From 1979 to 1981 there were 27 cases with nine R's and four fatalities, a 95.3% success. Departures from published U.S. Navy standards for treatments for the 1971 to 1978 and the 1979 to 1981 periods exceeded 10%. For both groups nonstandard table usage prompted a 14% retreatment rate, significantly higher than a 5% retreatment rate for standard use of the tables. Use of the oxygen tables, according to U.S. Navy standards, produced a 95.5% overall one-treatment success. The term "substantial relief" introduces a possible ambiguity promoting misinterpretation of treatment criteria and may disguise incomplete treatments.

Department: **Environmental Medicine**

Head: E. K. Eric Gunderson, Ph.D.

This Department has continued to develop, test, and evaluate medical information systems for Naval environments. The Navy Occupational Health Information Management System (NOHIMS) has been

installed at two industrial sites, the Navy Air Rework Facility, North Island, and the Naval Shipyard, Bremerton, Washington, for trial and further development. The Navy Mental Health Information System (NAMHIS), an extremely versatile psychiatric recordkeeping and reporting system, has been completed for installation at the Mental Hygiene Clinic, Naval Station, San Diego, on a trial basis. Work has begun on design of a combat casualty care information system for use by the Marine Corps in garrison and in the field. The Department expects further growth and expansion of our work on medical information systems for field or operational environments including Navy ships.

Large-scale epidemiological studies continue on health hazards in varied Naval occupations and environments, including surface ships, diving, and aviation. The study of low white blood cell counts among employees at the Naval Weapons Center, China Lake, has concluded data collection, and analyses of factors associated with leukopenia such as specific work location and type of exposure are at an advanced stage. A major study of the long-term health effects of submarine service was

begun during the past year. Studies of specific disease categories, such as cancer, heart disease, and accidental injuries, as well as studies of racial or ethnic differences have contributed to understanding of health problems in the entire Navy population. The consequences of naval disaster involving multiple deaths and/or hospitalization have been examined in a series of exploratory studies. The Department technical staff has made many important advances in file and data management techniques which have greatly enhanced our capabilities for manipulating very large and complex data bases.

83-8 Pugh, WM; DD Beck & DM Ramsey-Klee Work Unit # M0933-PN.003-0001
An Overview of the Navy Occupational Health Information Monitoring System (NOHIMS)

Abstract: The Navy employs hundreds of thousands of workers (both civilian and military) who are scattered across the country, involved in a variety of diverse industrial operations, and exposed to multiple health risks from an array of chemicals and other agents. In order to provide a safe and healthful work environment for these workers as required by the Occupational Safety and Health Act of 1970, the Navy has developed the Navy Occupational Health Information Monitoring System (NOHIMS) and is currently implementing a pilot system at the Naval Air Rework Facility, San Diego. NOHIMS has been designed to insure that (1) all individuals exposed to hazardous agents within a facility are identified, (2) all exposed individuals are given periodic examinations, (3) examinations include those tests and procedures needed for prudent monitoring, (4) the environmental information which led to the decision to monitor or not to monitor an individual is recorded, and (5) sufficient data for epidemiological studies are retained in a readily accessible form.

83-10 Ferguson, JC; MS McNally & RF Booth Work Unit # MF58.527.1C2-0003
Individual Characteristics as Predictors of Accidental Injuries in Naval Personnel
<Center Publication, AD# A129-98>

Abstract: Personnel characteristics and occupational factors were investigated in order to identify groups with elevated risks of accidental injury in naval environments during first enlistments. The individual characteristics of age at enlistment, educational level, and mental ability all were found to relate significantly to injury when considered singly. When considered jointly, however, only education had a major effect on injury rate. In general, the results indicated that the same individual characteristics that predict poor military performance also predict risk of accidental injury.

The occupational analysis identified a number of high-risk occupational specialties (occupations with injury rates above the Navy norm). With the exception of Hospital Corpsmen, all of these occupations were engineering, construction, or aviation specialties in which exposure to hazardous machinery or equipment was evident. Improved safety training and closer supervision should be considered for these personnel, particularly nonhigh school graduates.

A modified life table technique was found to be appropriate for this type of longitudinal analysis where large and uneven withdrawals from the cohort occurred. Further analyses of large cohorts from high-risk occupations will be needed to understand the causal factors underlying observed differences in injury rate.

83-2 Chaffee, RB; GD Baker & D Kolb Work Unit # M0933-PN.00-0003
The Navy Mental Health Information System (NAMHIS): An Overview
<Center Publication, AD# A126-087>

Abstract: A standardized mental health recordkeeping system has been developed by the this

Center to serve as a basis for a comprehensive automated Navy Mental Health Information System (NAMHIS). The system is designed to collect and store information obtained in direct patient contacts to generate consultation reports and to perform administrative functions. An individual patient record is initiated when an individual first comes to an outpatient mental health clinic, and an Administrative/Encounter Form is completed. It contains basic demographic data and information about who referred the patient, reasons for referral, services provided, disposition as well as clinician and clinic identifications. Each time an individual returns to the clinic a Follow-up/Encounter Form is completed to record the service provided and the disposition. All data are entered into the computer via a terminal located in the clinic. From these data the following reports can be generated: Report of Consultation, Monthly Managerial Report, Monthly Quality Assurance Report, and Monthly Outpatient Morbidity Report. Initially, the system will be implemented on a fully automated basis in one clinic in the San Diego region. Future plans call for region-wide implementation and ultimately recommendations concerning Navy-wide implementation.

83-36 Congleton, MW; F Glogower & GD Baker Work Unit # M0933-PN.00-0003
The Navy Mental Health Information System Mental Status Examination: Development and Use

Abstract: This report documents the development and implementation of the Navy Mental Health Information System (NAMHIS) Mental Status Examination (MSE) module. The primary design criteria for the NAMHIS MSE was to provide a standardized, comprehensive protocol for evaluating and documenting the mental status of patients in Navy outpatient mental health clinics. A review of existing mental status examinations resulted in the selection of the Missouri MSE as a starting product. This MSE had undergone extensive reliability and validity testing and could be tailored to conform to the NAMHIS design criteria. The rationale for changes made in the Missouri MSE is explained and the final instrument is illustrated in this report.

83-38 Baker, GD; FD Glogower & MW Congleton Work Unit # M0933-PN.00-0003
The Navy Mental Health Information System (NAMHIS): A Functional Description

Abstract: A comprehensive, automated Navy Mental Health Information System (NAMHIS) has been developed at this Center for use in Navy outpatient mental health clinics. NAMHIS provides three major services. First, it is a medical recordkeeping system. Standardized clinical and administrative information from individual patient/clinician encounters are collected and stored in an automated medical record format. Easy access to these records is facilitated and timely reports of patient/clinician consultations are generated. Second, it serves as a management information system with monthly administrative reports and a readily available database to answer management related queries, and third, it provides a scientific database to support research queries and major investigative projects.

83-33 Garland, GC Work Unit # MF58.52.001-0007
Medical Care Quality Evaluation using the Fleet Marine Force Medical Information System

Abstract: The Fleet Marine Force medical information system should include provisions for evaluation of the medical care provided at all echelon levels. The care provided in the immediate period after an injury can determine likelihood of survival or extent of disability. Recent advances in trauma scores that could be applied in the field can greatly enhance capabilities for evaluation studies, epidemiologic research, and disease surveillance.

83-34 Pugh, WM, F Borkat, CW Bollinger, M Congleton & EKE Gunderson Work Unit # M0095-PN.001-107
Preliminary Design of a Combat Casualty Medical Information System

Abstract: Communication of medical information is critical in a combat environment where the casualty is treated at several different echelons of the evacuation chain. A system designed to provide this communication would include a microprocessor at the third echelon of care. Data would be entered into the microprocessor via a revised medical card with machine readable information, an electronically encoded data tag, and portable terminals. These data then would be used to create data sheets for the permanent inpatient record, and reports could be generated for medical regulation, supply, and personnel accounting. Also, analyses could be performed for epidemiology and medical intelligence.

83-35 Bollinger, CW & WM Pugh Work Unit # M0095-PN.001-107
Automation of Marine Corps Casualty Medical Data Management

Abstract: The accelerated pace of combat operations, together with the increases sophistication of medical care available to forward units, demands that we improve the efficiency of our data transfer and casualty management. Automation has the potential for improving the speed and accuracy of information relative to casualties for forward tactical units and for support to and administrative units to the rear of an operation.

83-14 Garland, FC; GM Seal & MR White Work Unit # MR01.22-001-0005
A Comparison of Total White Blood Cell Counts on the Technicon H6000 and Coulter Counter Model ZBI in an Occupational Health Program

Abstract: White blood cell (WBC) counts obtained using a Technicon H6000 in a large occupational health program were compared with counts obtained on identical samples using a Coulter Counter Model ZBI. To assure quality control and to assess the comparability of results obtained on the two machines, a 25% systematic sample (N=586) of analyses performed on the Technicon were independently and blindly performed on the Coulter Counter. The Pearson product-moment-correlation between WBC counts from the two machines was $r=.94$ ($p \leq .001$). The mean WBC count was 6,664 cells/mm³ for the Technicon and 6,790 cells/mm³ for the Coulter Counter. The estimated prevalence of leukopenia (WBC counts $\leq 4,500$ cell/mm³) was 10.6% using the Technicon and 9.7% using the Coulter Counter. The results demonstrate that the two machines provide results which can be directly compared without correlation.

83-39 Palinkas, LA & FC Garland Work Unit # MR0000.01.01-6033
Racial Differences in Hypertension and Coronary Heart Disease in the U.S. Navy

Abstract: Hypertension affects a substantial percentage of the adult population in the United States and has been implicated in the etiology of stroke and coronary heart disease. The risk of hypertension in Blacks is approximately twice as great as it is in Whites. The purpose of this study was to determine if Blacks in the U.S. Navy are at significant risk of hospitalization for hypertension and coronary heart disease. Data were collected from two separate studies--a cross-sectional study of all enlisted males on active duty between 1974 and 1979 and a longitudinal study of a cohort of enlisted personnel who entered the Navy in 1974. Racial differences were examined in terms of age and socioeconomic status. The results indicated that Blacks have elevated rates of hypertension and Whites have elevated rates of coronary heart disease. Both diseases also were found to be associated with socioeconomic status. The racial group differences were not found

to be statistically significant, however, after adjusting for age differences. Nevertheless, the divergence in association between hypertension and coronary heart disease suggests the need for further research on the etiology of the two diseases and their presumed association.

83-22 Palinkas, LA Work Unit # MR0000.01.01-6033
Techniques for Psychosocial Epidemiology
In: P Karoly (ed), Measurement Strategies in Health Psychology. New York: John Wiley & Sons (in press). <Center Publication AD# A135-501>

Abstract: Psychosocial epidemiology is distinguished from other forms of epidemiologic research by its emphasis on the role of stress in the distribution of disease and its use of psychometric scales. This report provides a summary of the quantitative techniques employed in psychosocial studies in an attempt to provide a better conception of this subfield of epidemiology. The summary contains a review of research design, data collection, and data analysis. Prospective, retrospective and cross-sectional designs are examined and the advantages and disadvantages of each design evaluated. The data for psychosocial studies are usually represented in the form of rates and scales. The major dependent variables are typically disease and stress events while independent variables include sociodemographic characteristics, life events, social support indices, and personality measures. Methods of data analysis discussed include relative risk, chi-square tests, correlation coefficients, lifetime risk and attributable risk. Methods of association used specifically in prospective studies include life tables, survival analysis, and Fourier analysis. Multivariate analyses are used to adjust and control for potential confounding variables and test hypotheses. The last section of the report briefly examines the necessity of a qualitative perspective in each of the stages of a psychosocial study.

83-30 Hoiberg, A Work Unit # MF58.528.01A-0001
Health Effects Associated with Minority Status Among U.S. Navy Officers

Abstract: The purpose of this study was (1) to identify the health risks unique to various minority groups in the U.S. Navy Officer Corps, (2) to determine whether or not being a minority member had an impact on health, and (3) to examine differences in overall effectiveness rates between minority and dominant groups. Results showed that Black male officers had significantly higher hospitalization rates than Caucasians for six specific disorders; male nurses had significantly higher hospitalization rates than female nurses and the highest rates across three occupational groups; women unrestricted line officers had significantly higher rates for several stress-related disorders than their male counterparts; men in each of the three groups had higher rates than women for circulatory disorders whereas women's rates for pregnancy-related conditions and genitourinary disorders represented a large proportion of the sex differential in rates; and male Caucasians seemed to fare better in terms of health status and career longevity than Blacks or women. Several recommendations were presented.

83-31 Palinkas, LA & CL Colcord Work Unit # MR0000.01.01-6033
Health Risks among Enlisted Males in the U.S. Navy: Race and Ethnicity as Correlates of Hospital Admissions <Center Publication, AD# A137-249>

Abstract: With the increase in minority enlistments in recent years, it is necessary for clinicians and policymakers to determine whether a significant difference in health risks by race exists for U.S. Navy personnel. To assess this risk, hospital admissions among Black and Caucasian

enlisted males in the Navy between 1974 and 1979 were examined in a cross-sectional study. Age-adjusted rates for racial subgroups by year hospitalized, occupation, and education were calculated. Results indicate that the health status of Blacks has consistently improved such that, by 1979, there were no significant racial differences in total hospitalization rates. Significant racial group differences were discovered, however, in seven major diagnostic categories. Blacks were at greater risk of hospitalization for mental disorders, diseases of the musculoskeletal system, diseases of the genitourinary system, symptoms and ill-defined conditions, and supplementary classifications. Caucasians, on the other hand, were found to be at risk for diseases of the skin and subcutaneous tissue, and accidents, poisonings and violence. These patterns of disease risk were attributed to differences in age, occupation, education, access to health care prior to entrance into the service, and cultural patterns relating to expectations, job satisfaction, and perception of stress.

83-24 McCaughey, BG Work Unit # MR0000.01.01-6030
 Bereavement: Intervention Following an Accident Involving Multiple Deaths and No Survivors
 <Center Publication, AD# A135-701> Military Medicine (in press)

Abstract: High risk military operations occasionally result in accidents involving multiple deaths with no survivors. The effect on the command can be severe and result in operational ineffectiveness. An organized intervention supported by psychiatrists and psychologists that involves command in lectures, small groups and individual psychotherapy can be offered.

83-9 Chaffee, RB & P Coben Work Unit # M0933-PN.00-0003
 Temporal Variation in Completed Suicide <Center Publication, AD# A133-858>

Abstract: The predictability of self-destructive behavior was investigated by analyzing the dates of occurrence for a sample of 52 completed suicides on 4 temporal variables: season, month, day-of-the-week, and national holidays. The sample of Navy male enlisted personnel was drawn from computerized medical history files. Chi-square analyses revealed no significant differences for any of the four temporal variables. The present study indicates that temporal factors should be evaluated for their particular significance in each case without assumptions concerning populations trends

83-16 Burr, RG Work Unit # M0099-PN.01C-0008
 Smoking Behavior among U.S. Navy Enlisted Men: Some Contributing Factors
 <Center Publication, AD# A131-203>

Abstract: Factors contributing to the high incidence of smoking in a sample of 505 U.S. Navy enlisted men were examined. Levenson's (1973) multidimensional locus of control scale was used to assess personality differences between smokers and nonsmokers. Also measured were perceptions of stress and peer relationships. It was hypothesized that nonsmokers would be more internal, less chance oriented, report less stress, and perceive less positive peer relationships than smokers. The results generally supported the first three hypotheses, but did not support the fourth. It was suggested that programs to promote internal expectations, such as the Navy's Health Readiness Program, may be a method of lowering the high incidence of smoking. Because of the low proportion of variance accounted for, more immediate and perhaps more salient solutions mentioned were: (1) encourage those in the chain of command to set a no-smoking example, (2) stop the practice of giving work breaks for smoking, and (3) discontinue military price discounts on cigarettes.

Abstract: Because Navy administrative regulations are intricately related to effective clinical service delivery, Navy mental health professionals must know what regulations affect them and what those regulations entail. There is no single source that delineates this information. The goal of this project was to provide Navy mental health professionals with an up-to-date, cross indexed listing of all references for Navy, Marine Corps, and Coast Guard regulations pertaining to mental health.

WORK FOR SCIENTIFIC JOURNALS

Editorial input by staff members for 1983 include:

Thomas E. Berghage, CDR MC USN

Editorial Board, Undersea Biomedical Research Journal

Anne Hoiberg

Associate Editor, Armed Forces and Society

Associate Editor, Psychological Reports

Thomas F. Hilton, LT MSC USN

Feature Editor, Society for the Advancement of Social Psychology Newsletter (for applied social psychology and professional issues)

David J. Hord, Ph.D.

Consulting Editor, Psychophysiology

Laverne C. Johnson, Ph.D.

Associate Editor, EEG and Clinical Neurophysiology

Reviewer, Sleep, Science, Psychophysiology

Paul Naitoh, Ph.D.

Cooperating Editor, Educational Test and Measurement

Associate Editor, Perceptual and Motor Skills

Associate Editor, Psychophysiology

Reviewer, EEG and Clinical Neurophysiology, Sleep

REPORTS PUBLISHED IN 1983*

- Caplan, RD; A Abbey, DA Abramis, FM Andrews, TL CONWAY & JRP French, Jr.
Tranquillizer Use and Well-Being: A Longitudinal Study of Social and Psychological Effects
(July 1983 Technical Report, presented to Hoffmann-LaRoche, Inc.)
- CRISMAN, RP & RJ Tomaned
Cellular Adaptations to the Myocardium in Endurance Trained Spontaneously Hypertensive Rats
Fed. Proc., 1983, 42(3), 1718
- ENGLUND, CD; P NAITOH & D RYMAN
The Effects of Moderate Physical Work on Chronopsychological Variables during Sustained Operations. In: Proceedings of the XVth Meeting of the International Society for Chronopsychology, 13-18 September 1981, Minneapolis, Minnesota. 1983 (8 Nov)
- Freeman, LD; DR Hooper, DF Lathen, DP NELSON, WO Harrison & DS Anderson
Brief Prophylaxis with Doxycycline for the Prevention of Traveler's Diarrhea
Gastroenterology, 1983, 84, 276
- GUNDERSON, EKE & C COLCORD
Health Risks in Naval Occupations: An Overview
Abstracted: Lifeline, 1983 (May/June), 22
<Report No. 82-1, Center Publication, AD# A123-133>
- Hartman, E; JG Lindsley & CL SPINWEBER
Chronic Insomnia: Effects of Tryptophan, Flurazepam, Secobarbital, and Placebo
Psychopharmacology, 1983, 80, 138-142
- Hartmann, E; CL SPINWEBER & JC Ware
Effect of Amino Acids on Quantified Sleepiness
Nutrition and Behavior, 1983, 1, 179-183
- HILTON, TF
(Review) S Canter & D Canter (eds), Psychology in Practice. Chichester, UK: John Wiley & Sons, 1982
SASP Newsletter, 1983, (1), 14
- HILTON, TF
Advancing Psychology as a Profession. ibid., (1), 21
- HILTON, TF
Reacting to the Political Overthrow of Social Science Research. ibid., 9(2), 8
- HILTON, TF
Nontraditional Versus Nonrelevant Employment: Reply to Crandall. ibid., 9(2), 6
- HILTON, TF
S.B. Sells' Career and the Basic-applied Interface: Emeritus Retrospections. ibid., 9(3), 1
- HODGDON, JA & EJ MARCINIK
The Effects of Various Modes, Intensities and Work/Rest Cycles on Fitness Parameters.
- HODGDON, JA & BC Beckett
Another Validation of the RSG4 Maximal Work Capacity Test
- HODGDON, JA & EJ MARCINIK
Effect of Intensity, Work-Rest Intervals and Inclusion of Running on Physical Fitness Changes Following circuit Weight Training
- HODGDON, JA
A Review of Sustained Military Operations Research
- HODGDON, JA; CE ENGLUND & P NAITOH
Physical Fitness and Physical Work: Moderators of sustained mental performance?
In: Summary of the Proceedings of the 5th Meeting of RSG4, Physical Fitness with Special Reference to Military Forces, 11-15 September 1983, Brussels, Belgium. NATO Report DS/A/DR (83)
- HOIBERG, A
Women in the Navy: Performance, Health and Motherhood
In: FD Margiotta, J Brown, MJ Collins (eds), Changing U.S Military Manpower Realities. Boulder, Colorado: Westview Press, 1983. pp 175-191 <Report 79-15, AD# A130-167>
- HOIBERG, A & C BLOOD
Age-Specific Morbidity among Naval Aviators
Aviation, Space & Environmental Medicine, 1983 (Oct), 54, 912-918 <AD# A134-779>
<Report No. 82-31, Center Publication, AD# A127-749>
- JOHNSON, LC & CL SPINWEBER
Quality of Sleep and Performance in the Navy: A Longitudinal Study of Good and Poor Sleepers
In: C Guilleminault & E Lugaresi (eds), Sleep/Wake Disorders: Natural History, Epidemiology and Long Term Evolution. New York: Raven Press, 1983. pp 13-28
Good and Poor Sleepers Differ in Navy Performance
Military Medicine, 1983, 148(9), 727-731 (AD# A134-218)
<Report No. 82-8, Center Publication, AD# A8-420>

* Names in capital letters are NHRC staff (current and past).

- JOHNSON, LC; CL SPINWEBER, WF Seidel & WC Dement
Sleep Spindle and Delta Changes during Chronic use of a Short-Acting and a
Long-Acting Benzodiazepine Hypnotic
EEG & Clinical Neurophysiology, 1983, 55, 662-667 <Report No. 82-, AD# A130-773>
- KILPATRICK, ME; WR SANBORN, EA EDWARDS, WT Harrington & RK Boehm
Suitcase-sized Microbiology and Clinical Laboratories for Deployed Military Medical Use
Military Medicine, 1983, 148(12), 914-916
<Report No. 82-26, Center Publication, AD# A123-634>
- KOLB, D; GD BAKER & EKE GUNDERSON
Effects of Alcohol Rehabilitation Treatment on Health and Performance of Navy Enlisted Men
Drug and Alcohol Dependence, 1983, 11, 309-319 (Report No. 82-9, AD# A120-038)
- KOLB, D & EKE GUNDERSON
Medical Histories of Problem Drinkers during their First Twelve Years of Naval Service
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- Lammers, HB; LE Leibowitz, GE SEYMOUR & JE Hennessey
Humor and Cognitive Responses to Advertising Stimuli: A Trace Consolidation Approach
Journal of Business Research, 1983, 11, 173-185
- Marsh, WL Jr.; DP NELSON & HM Koenig
Free Erythrocyte Protoporphyrin (FEP) I. The FEP test is Clinically useful in Classifying
Microcytic RBC Disorders in Adults
American Journal of Clinical Pathology, 1983, 79, 655
- Marsh, WL Jr.; DP NELSON & HM Koenig
Free Erythrocyte (FEP) II. The FEP Test is Clinically useful in Classifying Microcytic RBC
Disorders in Adults
American Journal of Clinical Pathology, 1983, 79, 661
- Marsh, WL Jr.; ZR Rogers, DP NELSON & TS Vedvick
Hematologic Findings in Southeast Asian Immigrants with Particular Reference to Hemoglobin E.
Annals of Clinical Laboratory Science, 1983, 13, 299
- NAITOH, P
Takashima's No-psycho-somatic Medicine
The International Forum for Logotherapy, 1983, 6(1), 50-54
- NAITOH, P
Signal Detection Therapy as Applied to Vigilance Performance of Sleep Deprived Subject
Sleep, 1983, 6, 359-361
- NAITOH, P; AN Beare, RJ BIERSENER & CE ENGLUND
Altered Circadian Periodicities in Oral Temperature and Mood in Men on an 18 Hour Work-Rest
Cycle during a Nuclear Submarine Patrol
International Journal of Chronobiology, 1983, 8, 149-173 <Report No. 81-8, AD# A2-590>
- NICE, DS
The Course of Depressive Affect in Navy Wives during Family Separation
Military Medicine, 1983, 148(4), 341-343 (Report No. 80-24, AD# A128-460)
- NICE, DS & L DUTTON
Active Duty vs. Non-Active Duty use of Navy and Marine Corps Medical Outpatient Services
Military Medicine, 1983, 148(6), 527-529 (Report No. 82-7, AD# A130-689)
- NICE, DS & R Monzon
Attitudes of Military Health Care Providers toward Proposed Automation of Outpatient
Medical Records
Military Medicine, 1983, 148(12), 911-913 <Report No. 82-15>
- NICE, DS; MC BUTLER & L DUTTON
Patient Satisfaction in Adjacent Family Practice and NonFamily Practice Navy Outpatient Clinics
The Journal of Family Practice, 1983, 17(3), 463-466
<Report No. 82-20, Center Publication, AD# A126-867>
- Shea, PD; MU Glover, JB Handler, DP NELSON & WVR Vieweg
Nonvolumetric Assessment of Ventricular Function by Two-Dimensional Echocardiography in
Patients with Coronary Artery Disease
Journal of Clinical Ultrasound, 1983, 11, 415-420
- SPINWEBER, CL; R Ursin, RP HILBERT & RL HILDERBRAND
L-tryptophan: Effects on Daytime Sleep Latency and the Waking EEG
EEG & Clinical Neurophysiology, 1983, 55, 652-661 <Report No. 82-24, AD# A131-181>
- Talbott, E; J HELMKAMP, K Matthews, L Kuller & E Cottingham
Occupational Evidence Linking Noise Exposure as a Risk Factor for Hypertension: The
The Pittsburgh Noise and Hypertension Project
Circulation, 1983, 68(4), Part II

Ursin, R; J MOSES, P NAITOH & LC JOHNSON
REM-NRME Cycle in the Cat may be Sleep Dependent
Sleep, 1983, 6(1), 1-9

VICKERS, RR; TL CONWAY & MA HAIGHT
Association between Levenson's Dimensions of Locus of Control and Measures of Coping and
Defense Mechanisms
Psychological Reports, 1983, 52, 323-333 <Report No. 81-37; AD# A126-150>

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MANUSCRIPTS "IN PRESS"

GARLAND, FC; G Seals & G Luiken <Report No. 82-23>
Computers in Hematology: Implementation in an Occupational Health Clinic
In: Proceedings, 16th Annual International Conference on System Sciences, 6-8 January 1983,
Honolulu, Hawaii (in press)

GUNDERSON, EKE; RE Mitchell & RJ BIERSENER <Report No. 79-47>
Longitudinal Health Research in the U.S. Navy
In: S Mednick (ed), Longitudinal Research in the United States (in press)

HOIBERG, A <Report No. 82-12>
Longitudinal Health Risks among Graduates and Disenrollees from Diving School
Journal of Society of Occupational Medicine, (in press)

HOIBERG, A <Report No. 82-23>
Health Status of Women in the U.S. Military
Health Psychology, (in press)

HOIBERG, A; S BERARD, RH Watten & C Caine <Report No. 82-33>
Correlates of Weight Loss in Treatment and Follow-up
International Journal of Obesity, (in press)

HOIBERG, A <Report No. 80-28>
Military Occupations: The cutting edge for women?
In: JA Arima (ed), Military Psychology: The Cutting Edge. Monterey: Naval Postgraduate
School, (in press)

JONES, AP; DS MAIN, MC BUTLER & LA JOHNSON <Report No. 81-13>
Narrative Job Descriptions as Potential Sources of Job Analysis Ratings
Personnel Psychology, (in press)

JONES, AP; LA JOHNSON, MC BUTLER & DS MAIN <Report No. 82-34>
Apples and Oranges: An Empirical Comparison of Commonly Used Indices of Interrater Agreement
Academy of Management Journal, (in press)

KOLB, D & EKE GUNDERSON <Report No. 80-17>
Research on Alcohol Abuse and Rehabilitation in the U.S. Navy
In: M Schuckit (ed), The Epidemiology of Alcoholism (in press)

McNALLY, MS & JC FERGUSON <Report No. 82--35>
A Longitudinal Analysis of Injuries Resulting in Physical Disability
Accident Analysis and Prevention, (in press)

RAHE, RH <Report No. 79-48>
Psychological Aspects of Coronary Heart Disease
In: RO Pasnau (ed), Psychosocial Aspects of Medical Practice, Vol. II. Menlo Park: Addison-
Wesley Publishing Co., Inc. (in press)

SANBORN, WR <Report No. 81-32>
Development of Portable Rapid Diagnostic Microbiology Systems for Support of Primary
Health Care Delivery
The Indian Journal of Pediatrics, (in press)

SPINWEBER, CL <Report No. 80-25>
Plasma L-tryptophan Levels, Subjective Sleepiness, and Daytime Sleep
In: E Hartman (ed), L-tryptophan in Psychiatry and Neurology. New Haven: Yale University
Press, (in press)

VICKERS, RR; TL CONWAY, RH RAHE & HW WARD <Report No. 80-20>
Within-Person Covariation between Mood and Biochemicals
Biological Psychology, (in press)

DURING 1983...

Formal reports of research findings were reported at national, international, and regional meetings of scientific and medical societies.

American Anthropological Association, Chicago, Illinois, 16-20 November 1983

Dr. Palinkas: "Ethnicity and Illness: Considerations of Method and Theory"

American Association for the Advancement of Science, Detroit, Michigan, 26-31 May 1983

Dr. Spinweber: "Sleeping Aids: Behavioral and Cognitive Effects"

American College of Sports Medicine, Montreal, Canada, 16-21 May 1983

Dr. Pepper: "Reproductive Hormone Levels of Regularly Cycling and Oligo-amenorrheic Females Before and After a Marathon"

American Physiology Society, Honolulu, Hawaii, 21 August 1983

Dr. Pepper: "Training Induced Reproductive Hormone Changes in Regularly Menstruating vs. Oligo-amenorrheic Runners"

American Psychiatric Association, Navy Seminar, New York City, New York, 30 April 1983

CDR McCaughey: "Bereavement: Management in a Military Setting Following an Accident Involving Multiple Deaths"

American Psychological Association, Anaheim, California, 26-30 August 1983

LT Hilton: "Employee Self-esteem: An Empirical and Theoretical Clarification"
(Hilton/Butler/Bruni)

Dr. Englund: "Application of Chronopsychology to Human Factor Requirements"

Dr. Englund: "Environmental and Situational Influences on Human Performance" (Paper Session Divisions 21 & 14)

Anne Hoiberg: "Physical and Mental Health Risks Associated with Diving" (Hoiberg/Blood)

Dr. Spinweber: "L-tryptophan: Evaluation of Hypnotic Efficacy in Chronic Poor Sleepers"

Dr. Spinweber: "Child Abuse Needs Assessment Home: Program Report and Evaluation"
Spinweber/Eggert/Bruich/Guttman)

Terry Conway: "Control Versus Social Support: Influence on Well Being"

Terry Conway: "Beliefs about Control in Different Life Domains"

LT Chaffee: "Self Destructive Behavior in the Navy: Precipitating Factors, Mental Disorders, and Previous Attempts" (Chaffee/Martha Callaghan-Chaffee)

American Public Health Association, Dallas, Texas, 13-17 November 1983

Terry Conway: "Social Support, Control, and Well-being in Tranquilizer Users and Non-users"

American Society for Microbiology, New Orleans, Louisiana, 6-11 March 1983

Earl Edwards: "A Capillary-Latex Test for Grouping Streptococcal Antigen"

Irving Phillips (by Mr. Edwards): "A Modified Diffusion in Gel-Enzyme Linked Immunosorbent Assay, (DIG-ELISA) for Quantitation of Specific Antibody"

CDR Kilpatrick (by Mr. Edwards): "Rapid Diagnosis of Beta-Lactamase Enzyme in Penicillinase Producing Neisseria gonorrhea (PPNG) (Kilpatrick/Mueller/Edwards)

Association for the Psychophysiological Study of Sleep, 4th International Congress of Sleep Research Bologna, Italy, 19-22 July 1983

Dr. Johnson: "Effects of Benzodiazepines on Daytime Behavior and the Sleep EEG"

Dr. Spinweber: "Pre-sleep AEP Procedures Reduce Sleep Latency in Poor Sleepers"

Dr. Spinweber: "L-tryptophan (3 grams): Hypnotic Effects in Chronic Poor Sleepers"

24th Defense Research Group Seminar, The Human as a Limiting Element in Military Systems, Toronto, Ontario, Canada, 2-4 May 1983

Dr. Spinweber: "Psychopharmacological Techniques for Optimizing Human Performance"

Dr. Naitoh: "Extending Human Effectiveness during Sustained Operations through Sleep Management" (Englund/Naitoh)

Evaluation Network and Evaluation Research Society, Annual Meeting; "Evaluation '83", Chicago, Illinois, 20-22 October 1983

LT Hilton: "Provider Effects Associated with Shifting to a Family Practice Health Service" (Hilton/Butler)

Federation of American Societies for Experimental Biology, 67th Annual Meeting, Chicago, Illinois, -15 April 1983

LT Crisman (by Dr. Tomanek): "Cellular Adaptations of the Myocardium in Endurance Trained Spontaneously Hypertensive Rats"

4th International Congress on Noise as a Public Health Problem, Turin, Italy, 21-25 June 1983

Dr. Johnson: "Benzodiazepine Effects on Arousal Threshold during Sleep"

Hawaii International Conference on System Sciences, 16th Annual Meeting, Honolulu, Hawaii, 5-7 January 1983

Lawrence Hermansen: "A Prototype System Approach for the Definition of Medical Information Requirements"

Dr. Garland: "Computers in Hematology: Implementation in an Occupational Health Clinic"

1983 International Conference of the Inter-University Seminar on Armed Forces and Society, Chicago, Illinois, 21-23 October 1983

Anne Hoiberg: "Health Risks Associated with Minority Status among US. Navy Officers"

International Psychohistorical Association, 6th Annual Convention, New York, NY, 8-10 June 1983

Dr. Palinkas: "A Psychohistorical Perspective on Ethnicity and Stress-related Illness"

MUMP's Users Group Meeting, San Francisco, California, 30 May-4 June 1983

William Pugh: "An Overview of the Navy Occupational Health Information Monitoring System (NOHIMS)"

NATO Panel VIII Research Study Group (RSG)4: Physical Fitness with Special Reference to Military Forces, 5th Meeting; Military Hospital, Brussels, Belgium, 11-15 September 1983

Dr. Hodgdon: "Another Validation of the RSG4 Maximal Work Capacity Test" (Hodgdon/Beckett)

Dr. Hodgdon: "Effect of Intensity, Work-rest Intervals and Inclusion of Running on Physical Fitness Changes following Circuit Weight Training" (Hodgdon/Marcinik)

Dr. Hodgdon: "A Review of Sustained Military Operations Research"

Dr. Hodgdon: "Physical Fitness and Physical Work: Moderators of Sustained Mental Performance" (Hodgdon/Englund/Naitoh)

National Reports: "U.S. Navy Physical Readiness Program and Physical Fitness Research at NHRC"

National Institutes of Mental Health & NIH Office of Medical Consensus Development Conference, "Drugs and Insomnia", Washington, DC, 15-17 November 1983

Dr. Johnson: "Residual Effects of Sedative Hypnotics"

Society for Applied Anthropology, San Diego, 17-19 March 1983

Dr. Palinkas: "Migration and Mental Health in Rural Alaskan Fishing Communities"

Society for Computers in Psychology 13th Annual Meeting, San Diego, Calif, 16 November 1983

David Ryman: "Minicomputer Administred tasks in the Study of Effects of Sustained Work on Human Performance" (Ryman/Naitoh/Englund)

Dr. Englund: "Minicomputer Tasks in the Study of Effects of Long-Term work on Human Performance" (Englund/Ryman/Naitoh)

Undersea Medical Society, 8th Symposium on Underwater Physiology, 15-19 June, St. Jovite, Quebec, Canada

LCDR Gray: "A Retrospective Evaluation of Oxygen Recompression Procedures within the U. S. Navy"

Western Electroencephalography Society, Palo Alto, California, 4-5 March 1983

Dr. Johnson: "Effects of Hypotics on Daytime Behavior and the EEG"

Dr. Spinweber: "L-tryptophan: Effects on Daytime Sleep Latency and the Waking EEG" (Spinweber/Ursin/Hilderbrand)

Western Psychological Association, San Francisco, California, 27-30 April 1983

Dr. Spinweber: "Poor Sleep, Sleeping Pills, and Performance"

LT Hilton: "Differences in Patient and Perceived Patient Assessment of Care Quality Associated with Mode of Health Care Delivery" (Hilton/Butler/Nice)

LCDR Butler: "Organizational and Provider Role Effects on the Provision of Outpatient Health Care Services" (Butler/Nice/Hilton)

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Reports read, discussions, or presentations at other **congresses, centers, and local community media:**

AMEDD Division and Combat Psychiatry Conference, Seattle, Washington, 14-18 March 1983

LT Chaffee: "Suicide and Self-Destructive Behavior Among Navy Personnel"

CDR McCaughey: (1) "Bereavement: Management in a Military Setting following An Accident with Multiple Deaths" and
(2) "The Navy SPRINT (Special Psychiatric Rapid Intervention Team)"

Corporate Fitness Symposium, Dallas, Texas, 8 December 1983

LT Marcinik : "Navy Physical Performance Related Research: NHRC, San Diego, California" (Poster Presentation)

Department of Defense Committee for Physical Fitness, Fall Meeting, Randolph Air Force Base, San Antonio, Texas, 26-28 September 1983

LT Marcinik: "Development of Equations for Assessing the Body Composition of U.S. Navy Personnel"

Environmental Health Service, (Occupational Health Personnel), Bremerton, Washington, 25 August 1983

William Pugh - "NOHIMS Information Presentation"

Fleet Training Center (Monthly Command Meeting), Naval Station, San Diego, 19 August 1983

LT Lawlor: "Fitness Requirements for Male and Female Naval Personnel to Perform Selected Shipboard Tasks"

Human Factors Society of San Diego, Admiral Kidd Club, San Diego, 14 April 1983

LT Marcinik: "Development of Occupationally related Physical Training Programs in the Navy"

Naval Air Systems Command (NAVAIR) Occupational Safety & Health (OSH) Managers Workshop, Seven Seas Lodge, San Diego, 16 May 1983

William Pugh: "An Overview of NOHIMS"

Navy Mental Health Professionals Meeting, 6th Annual; Naval Hospital, Portsmouth, Virginia, 17 November 1983

CDR McCaughey: "Collision at Sea: The Traumatic Aftereffects"

Naval Personnel Research and Development Center, San Diego, February 1983

Anne Hoiberg: "Health Status of Women in the U.S. Military"
(for visitors CAPT Rosemary Park and LT Adelle Karmos of the Canadian Armed Forces)

Naval Training Center, EEO Committee, Multi-Cultural Awareness Workshop, San Diego, 22 August 1983

LT Lawlor: "Scientific Basis of Physical Conditioning Requirements for Women in the Navy"

Navy TRIMIS, Bethesda, Maryland, 14 July 1983

Dr. Gunderson: "Information Resources Management"

Personnel Testing Council of San Diego, San Diego, June 1983

LCDR Butler: "Effects of Organizational Climate on Attitudes, Performance, and
LT Hilton: Turnover"

Seminar on Medication for Depression and Sleeplessness, Western Behavioral Sciences Institute, La Jolla, California, 7 June 1983

Dr. Spinweber: "Effects of Sleep Aids on Sleep and Performance"

Symposium on Computer Applications in Medical Care (SCAMC), Baltimore, Maryland, 22-26 October 1983

LCDR Congleton: "NOHIMS, NAMHIS" (Poster Sessions)

William Pugh: Demonstration of "NOHIMS and Casualty Care Software"

Dr. Gunderson: "Combat Casualty Care"

Tri-Service Planning Committee, Army War College, Carlisle, Pennsylvania, 15 September 1983

LT Marcinik: Planning Committee for 1984 Olympic Scientific Congress (to be held 19-26
July 1984, Eugene, Oregon)

Western Occupational Medical Association, Newport Beach, California, 1 October 1983

William Pugh: "NOHIMS Overview"

White House Symposium on Physical Fitness and Sports Medicine, (Armed Services Application Session), Washington, DC, 16-17 November 1983

Dr. Hodgdon: "Strength Training in the U.S. Navy: Requirements, Training Programs, and
Resources" (with Capt W. E. Jackson)

KSDO Radio Station, San Diego, August 1983

Dr. Spinweber - The Meaning of Dreams

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Presentations of research findings were made at colloquia and meetings at **medical colleges and universities.**

Institute for Social Research, (Social Psychology Lunch Program), Ann Arbor, Michigan, 31 March 1983

Terry Conway: "Perceived Personal Control: Is more always better?"

Mesa College, Psychology Department, San Diego, 25 August 1983

Dr. Englund: "Circadian Rhythms and External Influences on Human Performance"

University of California, San Diego, La Jolla, California

- 8 February 1983, Department of Family and Social Medicine
Dr. Garland: "Hematological Monitoring at an Occupational Health Clinic"
- 13 May 1983, Institute for Continued Learning
Dr. Spinweber: "Good Sleep and Poor Sleep: Implications for Daytime Functioning"
- 26 October 1983, Neuroscience Department (Research Seminar)
Dr. Spinweber: "Tryptophan: Hypnotic Efficacy in Chronic Poor Sleepers"
- 8 November 1983, Department of Family and Social Medicine
Dr. Garland: "Hodgkins Disease in the U.S. Navy"
- 11 November 1983, Department of Pathology
LT Crisman: "Findings on Hypertension and the Cardiovascular System" (in conjunction with Dr. R. J. Tomanek)

University of Iowa, Biostructures Seminar, Iowa City, Iowa, 1 April 1983

- LT Crisman: "Effects of Endurance Training on the Myocardial Cell and Capillary Bed during the Development of Hypertension in SHR"

University of San Diego, (Colloquium hosted by Western Behavioral Science Institute). Alcala Park, San Diego, California, 5 April 1983

- Dr. Vickers: "Psychophysiological Reactions to Extreme Situations"
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Research results and findings were reported and discussions led with hospital staff at these hospitals and clinics.

Naval Hospitals:

Camp Pendleton, California, 8 June 1983

- Dr. Garland: "Cluster of Pediatric Cancer at Twenty-Nine Palms, California"

San Diego, California, Department of Psychiatry, 15 April 1983

- CDR McCaughey: "Bereavement: Management in a Military Setting following an Accident involving Multiple Deaths"

San Diego, California, Department of Psychiatry, Psychology Continuing Education Program, 9 September 1983

- Dr. Spinweber: "Sleep Research"

Naval Regional Dental Center, U.S. Navy Dental Corps Officer Continuing Education, Post-graduate Course, San Diego, California, 8 February 1983

- Captain Lang: "Current Concepts of Blood Coagulation"

Naval School of Health Sciences, Inservice Training for NSHS Staff, San Diego, California, 19 January 1983

- Dr. Spinweber: "Sleep Research at NHRC"
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Line Briefings

DEPARTMENT OF DEFENSE

Armed Forces Epidemiology Board (AFEB) Members, at San Diego, 26 January 1983

- "NOHIMS Briefing" by Dr. Gunderson and William Pugh

DOD Committee on Physical Fitness, Quarterly Meeting, Admiral Kidd Club, San Diego, 23-25 February 1983. Host: Naval Health Research Center

Attendees: Representatives from each of the military services, the U.S Coast Guard, The President's Council on Physical Fitness, and the Canadian Forces (see page 42).

"SPARTEN, A Circuit Weight/Aerobics Approach to Conditioning" by LT Marcinik
"Sustained Operations" by Dr. Naitoh
"Proposed Navy cardiac screening Program" by LCDR Gray
"U.S. Navy Body Composition Studies" and, equipment demonstration: "Use of the Cybex Isokinetic Dynamometer in Physical Fitness Research" by Dr. Hodgdon

Office of the Undersecretary of Defense for Research & Engineering, (CAPT James Vorsmarti), 21 March 1983 (at NHRC)

"Long-term Health Problems associated with Diving" by Anne Hoiberg
"White Blood Cell Counts at Naval Weapons Center, China Lake" by Dr. Garland

DOD Wellness Conference, Washington, DC, 20-24 June 1983
(Drs. Gray & Hodgdon's participation was requested by Office of the Assistant Secretary of Defense, John J. Johns)

Opening remarks "General Concepts of Individual Wellness" by LCDR Gray

U. S. ARMY

Walter Reed Army Institute of Research, Washington, DC

4-11 April 1983, (Col. Diggs and WRAIR staff; Col. Barquish, Dr. Johnson and staff of U.S. Army Institute of Infectious Diseases, Ft. Detrick, Maryland; and the Naval Medical Research Institute, Bethesda, Maryland)

"To coordinate Army and Navy Research Efforts in Rapid Identification of Infectious Agents" by CDR Nelson

5 December 1983, Department of Military Medical Psychophysiology (colloquium sponsored by LtCol Genser, Acting Head)

"Sleep Management: Extending Human Performance in Sustained Operations" by Dr. Naitoh

U. S. MARINE CORPS

FMEPAC Headquarters, Camp Smith, Hawaii (CAPT Williams, Force Dental Officer and CAPT Jones, Force Medical Officer) 7 January 1983

"Discussion on NHRC's role in the development of a Marine Corps Casualty Care Information System" by William Pugh

Marine Corps Recruit Depot, San Diego (Major General Rice, Commanding General)

28 February 1983, "Use of an Experimental Group of a Cross-section of Marines in a Running Techniques Improvement Course" by LCDR Gray

12 April 1983, "Follow-up Briefing and Results of Study" by LCDR Gray

1st Marine Corps Division, staff of; Camp Pendleton, California, 6 January 1983

"NHRC Studies of Heat Acclimation" by Dr. Hodgdon

U. S. NAVY

Chief, Naval Education & Training (CNET), Pensacola, Florida, 31 January 1983
(Present: Dr. Malloy, Deputy CNET for Educational Development; Dr. Von Matre, Navy Personnel Research & Development Center Liaison, and Dr. Perry, Training and Evaluation Group)

"Rationale for and Evaluation of the SPARTEN Total Body Fitness Program" by LT Marcinik

CINCLANTFLT Medical, (ADM Zimble), Norfolk, Virginia, 13 October 1983

"NOHIMS" by William Pugh

COMNAVSURFPAC, Naval Air Base, North Island, San Diego;

24 June 1983, Visit to CDR Bolshazy, Medical Officer by CDR Nelson

14 October 1983 (Medical Officer), "To gain logistical support for study of corpsmen aboard SURFPAC Units" by Dr. Nice

16 September 1983 (Captain Hauser, MC, USN, Force Medical Officer), "Discussion on NAMHIS, Future Collaborative Efforts for Possible Studies" by LCDR Glogower

15 November 1983, (Capt W. Fox, Asst Chief of Staff), "SPARTEN Shipboard Research Studies: Progress Report" by LT Marcinik

Fleet Training Center, 32nd Street, San Diego, 17 October 1983

"SPARTEN Conditioning for Physical Readiness Purposes" by LT Marcinik

Force Medical Officers from SURFPAC - 12 May; AIRPAC - 11 May; SUBPAC - 19 May; SURFLANT and AIRLANT - 24 May; CINCPACFLT MED - 17 May, and CINCLANTFLT MED - 26 May, at respective commands

"Interim Project Results of Shipboard Medical Communications/Evacuations Survey" by Dr. Nice

JAG Headquarters, (LT W. Harrington, JAGC, Special Assistant to the Judge Advocate General), Alexandria, Virginia, May 1983

"An Administrative Index for Mental Health Professionals" by CDR McCaughey

Naval Biosciences Laboratory, Oakland, California

10 June 1983 (CDR Sipple and Staff, at Oakland): "Discussion of Research Programs in Rapid Identification and Diagnosis of Biological Infectious Agents" by CDR Nelson

11 October 1983, Representatives from NBL, NMRI, NHRC, NMRDC, AMRDC, AMRIID, and ONR (at Oakland): "Round Table discussion of Army-Navy Research Objectives in Infectious Disease" by CDR Nelson

Naval Environmental Health Center, Norfolk, Virginia, 21-22 September 1983 (at Norfolk)

21-22 September 1983 (at Norfolk):

"Use of Inpatient Files, NOHIMS Update" by LCDR Helmkamp

"Hematological Monitoring at China Lake, Occupational Health" by Dr. Garland (with Capt Lang and Dr. Gunderson)

16 September, Captain Calcagnio, (at NHRC), "NOHIMS" by William Pugh

Naval Hospital, Camp Pendleton, 14 December 1983 (Capt P. Cope, NC Quality Assurance Coordinator)

"Staff Morale" by LCDR Glogower

Naval Hospital, Oakland (CAPT HJT Sears, Commanding Officer, and Psychiatry Department staff), 30 November-1 December 1983

"Expansion of Outpatient Mental Health Resources to Meet Needs of the Fleet; Switching to a Model of Liaison/Community Psychiatry" by LCDR Glogower

Naval Medical Data Services Center, 2 September 1983

(Naval Medical Command, Washington, DC: RADM R. F. Milnes-(02) and Captain P. H. Farrier-(24); Naval Medical Data Services Center, Bethesda, MD: Captain R. A. Payton, CO and LCDR J. R. Hummel, XO; Naval Medical R&D Command, Bethesda, MD: Dr. J. Osterman, (40) and CDR P. A. Truman (47)

"NOHIMS" by William Pugh

Naval Medical Clinic, San Diego:

Commanding Officer (Captain Pickett)

24 January 1983, "COSTAR System" by Dr. Gunderson

Commanding Officer (Captain Ferris)

13 September 1983, "NOHIMS Briefing" by William Pugh and "NAMHIS System" by Dr. Gunderson

4 October and 9 November 1983, "NAMHIS Briefing" by LCDR Glogower (at Naval Station)

Preventive Medicine Unit, 31 August 1983 (Behavioral Weight Control Program)

"Benefits of Exercise and Weight Control" by LT Lawlor

Naval Medical Research and Development Command, Bethesda, Maryland

9 March, CDR Truman, NMRDC-47 and CAPT Nelson, CO, NHEC, (at Bethesda) - Dr. Garland

3-5 May, CAPT Biersner, CDR Ashburn and Dr. Postow (at NHRC), "Interactions of Physical Fitness and Thermal Tolerance" by Dr. Pepper

31 May, CDR Strong (at Bethesda), "Shipboard Medical Communications/Evacuations Survey" by Dr. Nice

23 May, CDR Truman (at NHRC) - Dr. Garland

8 August, Dr. J. Osterman (at NHRC):

"Research for Longitudinal Studies Program" by Anne Hoiberg

"NOHIMS and Casualty Care System for Fleet Marine Corps" by William Pugh

"Interactions of Physical Fitness and Thermal Tolerance" by Dr. Pepper

"Neurometric Assessment Program" by Dr. Hord

12 October, Captain McCullagh (at NHRC):

"NAMHIS" by LCDR Glogower

"Fleet Marine Force Project Overview" by LCDR Glogower

"Research on the Longitudinal Studies Program" by Anne Hoiberg

21 October, CDR Ashburn, CDR Truman, CAPT Biersner and Dr. Postow (at Bethesda), "Program Reviews" by Dr. Gunderson

12 December, CDR Truman (at NHRC), "The Potential for using Sensitive Immunoassay Assay Techniques for the Biological Monitoring of Toxic Chemical Agents" by CDR Nelson

Naval Military Personnel Command (Capt W. E. Jackson, Head, Health and Physical Readiness Program, Code 6H), Washington, DC, 18 November 1983

Results of NHRC Body Composition studies, incorporation into new OPNAV-Instruction" by Dr. Hodgdon

Naval Personnel Research and Development Center, San Diego, 3 August 1983

"Neurometric Assessment Program" by Dr. Hord

Naval Support Force, Antarctica; Port Hueneme, Calif., 27-30 June 1983

"Screening of Applicants Requesting to Winter-Over at Antarctica (Operation Deep Freeze)" by CDR McCaughey

Naval Training Center:

Orlando, Florida, 24 January, (Admiral M. Hardington, Commander)

"Design of Strength Enhancement Programs for Navy Women" by LT Marcink

San Diego, Personnel Support Attachment, 5 April (Command Briefing)

"Physical Fitness related Research conducted by NHRC" by LT Marcink

San Diego, NAVADCOM, 9 June (ENS K. Cunningham, USN, Command Fitness Coordinator)

"Development of a Total Body Fitness Program for NAVADCOM Personnel" by LT Marcink

San Diego, Multi-Cultural Awareness Program (sponsored by EEO Committee), 22 August

"Workshop Facilitator" - LT Lawlor

San Diego, 19 December (CAPT H. L. Plowman, Commander)

"Overview of SPARTEN Recruit Conditioning Program" by LT Marcink

Office of Naval Research, Infectious Disease Project Officer (CDR Warren Schultz), 21 April

"Brief on affinity studies linked to rapid immunoassays of infectious agents" by CDR Nelson

Recruit Training Command:

Orlando, Florida, 24 January 1983 (CDR S. Kilpatrick, Executive Officer; LT Tellis, Director, Technical Training; and LT Stevens, Director, Water Survival and Physical Training)

"Appraisal of Current Training Procedures for Navy Women at RTC, Orlando" by LT Marcink

Recruit Training Command cont.

San Diego, Calif., 14 April 1983 (CDR Johnson-Evans, Executive Officer)
"An Overview of Research Studies conducted at Recruit Training Command, San Diego, Calif., and Orlando, Florida" by LT Marcinek

San Diego, 23 March 1983 (Capt J. Gardella, CO)
"NHRC Studies of Heat Acclimation. Plans for Circuit Weight Training Studies at RTC" by Dr. Hodgdon

San Diego, 19 December 1983 (Capt J. Gardella, CO)
"Overview of SPARTEN Recruit Conditioning Program" by LT Marcinek

Service School Command, Naval Training Center, San Diego, 14 October (Command presentation)

"Overview of Body Composition Studies conducted by the Naval Health Research Center" by LT Marcinek

USS SAMUEL GOMPERS (AD-37), 8 June 1983 (CDR J. W. Bruckner, USN, Executive Officer)

"Evaluation of a Variety of Circuit Weight Training Programs onboard the USS SAMUEL GOMPERS (AD-37)" by LT Marcinek

USS HALSEY (CG-23), 28 July 1983 (LT R Beck, Physical Fitness Officer)

"Evaluation of a 'Tiger-Band' Fitness Program Onboard USS Halsey" by LT Marcinek

USS LEFTWICH (DD-984), 3 August 1983 (Command Presentation - Site TV)

LT Marcinek - Circuit Weight Training for Improved Shipboard Physical Readiness

USS GEORGE PHILIP (FFG-12), 28 March 1983 (CDR D. Berkebille, Commanding Officer;
LCDR G. Hollingsworth, Executive Officer; and LT J. Fawcett, Physical Fitness Officer)

"An Aerobic/Circuit Weight Training Approach to Maintenance of Fitness Onboard Ship" by LT Marcinek



SPARTEN training onboard the USS George Philip (FFG-12)

Attendees at the
Quarterly Meeting of the DOD Committee on Physical Fitness
San Diego, California



U.S. AIR FORCE:

Colonel L. H. T. Johnson, USAF, ODASD (RA), Pentagon, Washington, Dc

Lt Colonel E. W. Ferguson, Department of Physiology, U. S. University of Health Sciences, Bethesda, Maryland

Brooks Air Force Base, Texas

Colonel J. L. Berkheiser, NC, USAF, Chief, Consumer Health Education

LT Colonel J. R. Sharp, USAF, Air Force S/G

Captain S. Murray, USAF, Advisor on Nutrition

L. G. Myhre, Ph.D., U.S. Air Force School of Aerospace Medicine

Randolph Air Force Base, Texas

Captain B. Butler,, USAF, Air Force AFMPC

L. M. Tidwell, HQ Air Force Manpower and Personnel Center, Special Officer on Fitness

U.S. ARMY

Major Earl B. Mally, USA,, The Surgeon General's Task Force on Fitness, HQDA (DASG-PSF), Washington

Chuck Ganter, USAIS, Director Training Development, Ft. Benning, Georgia

Army War College, Carlisle Barracks, Pennsylvania

Colonel F. Drews, USA, Director of Army Physical Fitness Research Institute

Army Soldier Physical Fitness Center, Ft. Harrison, Indiana

Colonel D. Lynn, USA, Director.

Captain J. Frazer, USA, Chief, Training Literature

Captain B. Wells, USA, Chief Training Development

U. S. COAST GUARD: LT D. Schulz, USCG, Commandant (G-PS-4), Washington, DC

U. S. MARINE CORPS: Major R. Stevens, USMC, Headquarters MC, Arlington, VA

U.S. NAVY:

Captain J. A. Butterfield, USN, DOD Coordinator, Physical Fitness, OSD (MRA&L) Manpower Policy, Washington, DC

Captain P. A. Flynn, OASD (HA) Pentagon, Washington, DC

Ash Hayes, Ed.D. and York Onnen, President's Council on Physical Fitness and Sports, Washington, DC

Naval Military Personnel Command, Washington, DC

Captain W. Jackson, USN, Health & Physical Readiness Program

Alice McGill, Ph.D., Health and Physical Readiness Program

Naval Medical Command, Washington, DC

Captain J. H. Senechal, MC, USN,

LCDR S. R. Lamar, MSC, USN

Naval Station, San Diego, California

LT D. Fox, USN, Coordinator, Life Modification/NARC

Naval Health Research Center, San Diego, California

Captain J. E. Lang, MC, USN, Commanding Officer

Commander T. E. Berghage,, MSC, USN

LCDR C. G. Gray, MC, USNR

LCDR K. M. Zwingelberg, MC, USN (TAD)

* LT E. J. Marcinik, MSC,, USNR
James A. Hodgdon, Ph.D.
Carl E. Englund, Ph.D.
Sharee Pepper, Ph.D.

CANADIAN FORCES: LTC L. Appleford, MC, Canadian Forces Medical Liaison Officer, Washington, DC

* Scientific and programatic presentations, tours of Recruit Training Center, Marine Corps Recruit Depot, USS George Philip (FFG-12) and NHRC organized by Dr. Hodgdon.

Collaboration with other facilities

On various occasions in support of work on current DD-1498 research work units, members of NHRC departments establish collaborative associations with personnel in other government and nongovernment facilities. A summary of these associations follows:

Health Psychology Department

Dr. Nice, Department Head, met with members of the Naval Submarine Medical Research Laboratory, Groton, regarding data on SUBPAC Medevacs. His data are being used to validate the accuracy of NSMRL's computer assisted diagnosis system.

During the final months (January to August) of an assignment at the University of Michigan, while completing requirements for admission to doctoral candidacy, Ms. Terry Conway collaborated with members of the Institute for Social Research, Ann Arbor (F. M. Andres, R. D. Caplan and J. R. P. French, Jr., along with A. Abbey and D. A. Abramis), on a longitudinal panel study of the social and psychological effects of tranquilizer use. Additionally she worked with C. B. Wortman and associates who were initiating a study on parental adjustment to loss of an infant from Sudden Infant Death Syndrome.

Biological Sciences Department

CDR Nelson continued his collaboration with Dr. W. R. Griswold, Department of Pediatrics, UCSD Medical School in 1) developing new methods for estimating antigen-antibody binding constants from dilution data, and 2) developing computer models for understanding how removal of free antibody influences the redistribution of bound antibody and how antibody affinity and concentration affect the measurement of antibody titers.

As an invited participant, CDR Nelson attended the U.C. Berkeley - Naval Biosciences Laboratory International Symposium "Rapid Identification of Infectious Agents" in Oakland, California, in October.

As NHRC's Technology Transfer Officer, CDR Nelson attended the fall, 13-17 November meeting of the Federal Laboratory Consortium in Biloxi, Mississippi. In conjunction with this travel he visited the Naval Biodynamics Laboratory in Michoud, Louisiana on 18 November.

Environmental Physiology Department

Dr. Hord with the University of Victoria Biology Department has completed the second phase of the study the effects of sustained wet-cold exposure on cognitive performance in man. On his neurometric assessment study he has met With Dr. Christine Schlichting of NSMRL and Dr. Dennis Reeves of NMRI

Dr. Naitoh has continued his yearly collaboration with Dr. C. Winget of NASA-Ames Research Center regarding "human circadian rhythms". Future plans with regard to sustained operations research, an approved current DD-1498, include collaboration with Dr. Robert Angus of Defence and Civil Institute of Environmental Medicine (DCIEM), and with LtCol S. Genser of the Walter Reed Army Institute of Research, Washington, DC.

LT Marcinik, working with personnel of the Naval Personnel Research and Development Center, collected physio-logical data on Navy male recruits at Recruit Training Center (RTC), San Diego, and female recruits at RTC, Orlando, Florida. These data will be entered into a NPRDC/NHRC physical fitness data base. He also provided technical assistance in establishing physical fitness/weight control programs to Naval Administrative Command, Naval Training Center, San Diego; Fleet Training Center, Naval Station, 32nd Street, San Diego; and Salvage Rescue Ship Pacific, Naval Station, 32nd Street, San Diego.

The following ships, ported in San Diego and Long Beach, were visited by LT Marcinik during 18 February through 16 March to develop shipboard facility training programs and to survey present exercise equipment and space aboard ship:

USS Deluth (LPD 6)	USS Juneau (LPD 10)	USS Schofield (FFG 3)
USS Okinawa (LPH 3)	USS Fox (CG 33)	USS George Philip (FFG 12)
USS Horne (CG 30)	USS Meyerkord (FF 1058)	USS St. Louis (LKA 116)
USS Bristol County (LST 1198)	USS Paul Foster (DD 964)	USS Mobile (LKA 115)
USS Pelilu (LHA 5)	USS Prairie (AD 15)	USS Berkeley (DDG 15)
USS Gridley (CG 21)		

LCDR Gray working at the Animal Lab of UCSD Department of Pathology, is conducting a co-operative study on effects of exercise, training, and feeding on gastrointestinal function.

In the July-December time frame LT Crisman, and staff at the Elliot Field Station, UCSD Extension, conducted experimental animal surgery to develop techniques and validate procedures to be utilized in establishing indwelling catheters and flow probes in support of a current IR DD-1498, "Bioenergetics of Exercise: Supply/Utilization Control Mechanisms involving the Gastrointestinal System with a Computer Simulation Model".

LT Crisman gave two presentations: 1) "Sus Scrofa as a Model for Bioenergetics Research" on 9 August at Bldg 272, NTC; and, 2) "Basic Research Undertaken at NHRC" on 6 October at Bldg 315.

Dr. Hodgdon, in collaboration with and in support of a U.S. Marine Corps contract with the Institute of Human Performance, tested VO2 max on USMC subjects to determine impact of fitness on task performance.

Another study between investigators at NHRC, UC San Francisco, Tulane University and Children's Hospital, San Diego, to study the effects of leg fatigue on sense of position at the knee joint has been approved.

Environmental Medicine Department

Dr. Garland attended the Armed Forces Epidemiology Board Meetings held 11 March at Walter Reed Army Institute of Research.

William Pugh implemented the NOHIMS software at the Naval Shipyard Medical Clinic, Bremerton, Washington, 13-15 December.

LCDR Congleton in September gave a COSTAR demonstration to Dr. Jerry Adams, Administrative Psychologist, Kaiser Permanente.

Dr. Gunderson reports:

On 8 April he met with Dr. Ostfeld, School of Public Health and Epidemiology, Yale University to discuss health effects of radiation exposure among nuclear submarine personnel. NHRC provided medical and service history follow-up data, associated with a new DD-1498 on health of submarine personnel, to the Yale research team.

At NEHC's (LCDR Foreman) request, NHRC is conducting an exploratory study, which may be expanded into a future DD-1498, of Navy personnel (Torpedomen) exposed to OTTO Fuel II, a torpedo propellant.

At the request of CDR Malstrom, Orthopedic Department, Oakland, Naval Hospital, NHRC is conducting an exploratory study of knee injuries. Hospitalizations and resulting disabilities are being analyzed. This preliminary study could lead to a larger investigation of this problem.

Behavioral Psychopharmacology Department

During the summer of 1983, Dietrich Schneider-Helmert, M.D., the Director of the Research Department, Psychiatric Clinic, Koenigsfelden, Switzerland, spent his sabbatical leave with the staff of the Behavioral Psychopharmacology Department. In one major project completed during his visit, Dr. Spinweber and Dr. Schneider collaborated in researching and writing a review paper on the efficacy of the amino acid l-tryptophan in the treatment of insomnia. This review of the research literature indicated that the severity and the persistence of the insomnia, age of the patient, and time of administration were all important factors influencing treatment outcome. This review is scheduled to be published as a Center Report in early 1984.

In addition, throughout 1983, Dr. Spinweber collaborated with Dennis Greenberger, Ph.D., of the Psychiatry Department, Naval Hospital, San Diego, on a study of sleepwalkers and bed-wetters in the Navy. All subjects were male recruits referred to the Naval Training Center Mental Health Unit for evaluation. The study involved administration of questionnaires such as the MMPI, stress and coping scales, and the NHRC Sleep Questionnaire, and also included interviews of each recruit to obtain a complete history of his sleep disorder. Since sleepwalking and bed-wetting are of special concern in the Navy and are cause for administrative discharge from the service, these data will provide important information relevant to the assessment, treatment, and eventual disposition of these cases. An abstract on the results of this study has been submitted to the Sleep Research Society for possible presentation at the annual meeting and a paper will be written in 1984.

The Department staff members continue to participate in the activities of other sleep research groups in the San Diego area, including those of Daniel F. Kripke, M.D., J. Christian Gillin, M.D., and Sonia Ancoli-Israel, Ph.D., at the VA Hospital, and the recently established sleep disorders groups at Scripps Clinic, comprised of Richard M. Timms, M.D., Stuart J. Menn, M.D., and Merrill M. Mitler, Ph.D. Dr. Spinweber continues to be involved in various projects conducted by Ernest Hartmann, M.D., Director of the Sleep and Dream Lab, in Boston, Massachusetts, and Dr. Johnson, with the sleep researchers at Stanford, including William C. Dement, M.D., Ph.D. and Wesley F. Seidel.

Administrative Services Department

To better serve the needs of NHRC's researchers and keep abreast of the latest developments in retrieval of scientific literature, Mrs. Aldous, Librarian, collaborated with and attended the following meetings:

- * 22-24 February the Joint Meeting of the Northern and Southern California Groups, in San Diego;
- * Electronic Mail was the subject of the San Diego's Medical Librarian meetings held April 13th at Kaiser Hospital, and 12 May at Naval Hospital, San Diego;
- * the Medical Library Group met 5 May in Los Angeles and October 19 at Naval Hospital, San Diego;

- * 27 May to 3 June was the National Medical Library Association's meeting in Houston, Texas;
 - * the 20 July meeting of the San Diego Federal Medical Librarians held at the San Diego VA Medical Center, there was a demonstration of the On-Line electronic mail system; and
 - * the San Diego On-Line User Group met 26 October at Sharp Hospital.
- In addition, Mrs. Aldous' training sessions included
- * the 16 March DIALOG on Med-Sci and MEDLINE files sponsored by San Diego State University (SDSU) Library;
 - * the Excerpta Medica Workshop sponsored by Elsevier and hosted by SDSU Library on 29-30 June;
 - * the 8 November Annual National Library of Medicine MEDLINE Update, sponsored by Pacific SW Medical Regional Library Service, hosted by the Long Beach VA hospital,
 - * the 3 June DIALOG Excerpta Medica seminar, and
 - * Planning Hospital Library Facilities (MLA CE 122) and OCLU utilization in Health Sciences Librarian (MLA CE 535).

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1983 Scientific Colloquiums

The monthly Scientific Colloquium continues to be a highlight of the scientific activities at NHRC. The Colloquia provide an opportunity for interaction among the total NHRC staff as well as scientific presentations or special lectures by speakers outside the Center and Navy. Initiated in 1977, the Annual Ardie Lubin Memorial Lecture provides an opportunity to honor Ardie as a scientist and to remember him as a valued colleague and friend.

20 January

"The Epidemiology of White Blood Cell Counts at the Naval Weapons Center, China Lake, California"

Frank J. Garland, Ph.D.
Environmental Medicine Department, NHRC

17 February

"Race and Ethnicity as Correlates of Health Risks among Naval Personnel"

Lawrence A. Palinkas, Ph.D.
NRC Postdoc
Environmental Medicine Department, NHRC



Dr. Palinkas

24 March

"Studies of Disasters in the U.S. Navy"

Commander Brian G. McCaughey, MC, USN
Environmental Medicine Department, NHRC

21 April

"Some Effects of Exercise on Female Reproductive Hormones"

Sharee J. Pepper, Ph.D.
NRC Postdoc, Environmental Physiology Department, NHRC

19 May

"Exercise and Gastrointestinal Physiology"

Lieutenant Commander Charles G. Gray, MC, USN
Environmental Physiology Department, NHRC

16 June

"The Impact of Health Treatment Modality: Family vs. Primary Care"

Lieutenant Thomas F. Hilton, MSC, USN
Health Psychology Department, NHRC

Special Lectures:

10 August

"The Role of Chronobiology in Shiftwork, Pharmacology and Toxicology"

Michael Smolensky, Ph.D., Associate Professor
Environmental School of Public Health, University of Texas-Houston

16 August

"Human Studies with the Delta Sleep Inducing Peptide"

Dietrich Schneider-Helmut, M.D.
Director of Research, Koenigsfeld Hospital, Switzerland

22 September

"Behavioral Psychopharmacology: Interventions to Enhance Human Performance"

Cheryl L. Spinweber, Ph.D.
Behavioral Psychopharmacology Department, NHRC

20 October

"Current and Future Research of the Environmental Physiology Department"

Paul Naitoh, Ph.D., Department Head, and
James A. Hodgdon, Ph.D.
Environmental Physiology Department, NHRC

"Summary of the Neurometric Assessment Program"

David Hord, Ph.D.
Environmental Physiology Department, NHRC

15 November

"Computer Medicine and Epidemiology"

E. K. Eric Gunderson, Ph.D.
Head, Environmental Medicine
Department, NHRC



Dr. Gunderson

6 December

7th Annual Ardie Lubin Memorial Lecture: "Life Stress and Physical Illness: Substantive Effects of Methodological Flaws"

Paul T. Costa, Jr., Ph.D.
National Institute on Aging, Gerontology Research Center
Baltimore City Hospital, Baltimore, Maryland

Workshops:

5 December, 2:00 PM "Personality Stability and the Prediction of Health and Other Behaviors"

6 December, 2:00 PM "Research Issues Pertinent to the Environmental Medicine Department" - Anne Hoiberg

7 December, 9:00 AM "Design and Interpretation of Longitudinal Studies on Health and Behavior"

15 December

"A Summary Review of Infectious Disease Research at NHRC"

Mr. Earl Edwards
Head, Biological Sciences Department, NHRC

ACADEMIC APPOINTMENTS

Some members of our staff teach in the evening, at local colleges. Several of our senior scientists hold Adjunct Professorships at the Local universities. These ties with local universities and colleges serve to keep our researchers up-to-date with the latest academic advances in their fields. Their appointments also speak for the acceptance of many of our staff and their work by academic appointment committees.

University of California at San Diego (UCSD), La Jolla, California

School of Medicine:

- E. K. Eric Gunderson, Ph.D. - Adjunct Clinical Professor of Psychiatry
- Laverne C. Johnson, Ph.D. - Adjunct Professor, Departments of Psychiatry and Neurosciences
- Cheryl L. Spinweber, Ph.D. - Visiting Lecturer, Dept of Psychology

University of Southern California (USC), Los Angeles, California

- Thomas E. Berghage
Commander, MSC, USN - Advisory Board, Institute for Marine and Coastal Studies
- George E. Seymour, Ph.D. - Part-time Faculty, Human Factors Department, Institute of Safety and Systems Management (Dr. David B. Smith, Chair)

San Diego State University (SDSU), San Diego, California

- Laverne C. Johnson, Ph.D. - Lecturer in Psychology (Professor Level)
- D. Stephen Nice, Ph.D. - Adjunct Faculty Member, Graduate School of Public Health
- James C. Helmkamp
LCDR, MSC, USN - Adjunct Faculty, Division of Occupational/Environmental Health, Graduate School of Public Health, College of Human Services

Texas A&M University, Galveston, Texas

- Michael W. Congleton
LCDR, MC, USNR - Post-Doctoral Position, Marine Science Department

University of Michigan, Ann Arbor, Michigan

- Terry L. Conway - Studies in Social Psychology Doctoral Program

California School of Professional Psychology, San Diego, California

- David Hord, Ph.D. - Lecturer, Advanced Physiological Psychology, and Chairman, Doctoral Dissertation Committee (3)
- George E. Seymour, Ph.D. - Part-time Faculty (for Dr. Susan Jasin)

Coleman College, San Diego, California

- Duell E. Wood
CDR, MSC, USN - Lecturer and Consultant

Institute for Social Research, Ann Arbor, Michigan

- Terry Conway - Research Assistant

Mesa College, San Diego

- Carl E. Englund, Ph.D. - Professor of Psychology, Advanced General Psychology

National University, San Diego

- Carl E. Englund, Ph.D. - Adjunct Professor, Life-Span Developmental Psychology

BIOLOGICAL SCIENCES RESEARCH

When the Department had received word of disestablishment, scheduled for 30 September 1984, and the planned non-transfer of functions, the staff began to seek other employment.

Staff who have departed, include:



HMC Manuel G. Abroguena transferred on 7 July 1983 to Keflovik, Iceland.



Patricia Yelenowsky, Biochemist, resigned on 12 August and is Sales rep for Boehringer Mannheim Biochemicals.



LCDR Eric J. Mueller, MSC, USN is shown working with anaerobic chamber used for cultivation of anaerobic bacterial. A rapid coagglutination method for identification of Bacteroides fragilis was developed. This study was completed when LCDR Mueller transferred 30 August.



Charmion McMillan Biological Lab Technician, is measuring protein concentrations on an antigen preparation. Mrs. McMillan transferred to a position with the U.S. Army Ordnance and transferred 23 October to Savanauh, Illinois.

Mrs. Hope Chapple, Department Secretary, left 1 September to accompany her husband on a 3-year oversea tour with the Naval Support Activity, Naples, Italy. She is now working in the Public Works office.



CDR Nelson LCDR Mueller Mr. Edwards Mr. Phillips

HM1 Quiaot Mrs. Chapple Mrs. McMillan HM1 Reyles
Mrs. Yelenowsky

"Farewell Luncheon held 12 August 1983"

CDR Dennis P. Nelson, MSC, USN, Biochemist, heads up the Biochemistry program. He reported onboard 1 October 1982.

HM1 Oswaldo V. Quiaot, is a Lab Technician in the Immunobiology Program. He reported onboard 1 December 1980.



Irving Phillips, Biological Lab Technician, "feeding" hybridoma cells for production of monoclonal antibody.

Irv reported onboard 5 May 1980.

HM2 Renato L. Reyles, Lab Technician, culturing streptococci to be used to confirm results of an experimental rapid identification method developed in the Immunobiology Section.

HM1 Reyles reported onboard 7 November 1980.



HMC William Spatz, Lab Technician, using the inverted microscope to examine hybridoma cells used in the production of monoclonal antibody.

HMC Spatz reported onboard 23 August 1982.



HM2 Richard Canavaciol, is a Lab Technician in the Biochemistry section. He reported onboard 11 December 1980.

Other Activities

HONORS AND AWARDS FOR THE MILITARY

Sailor of the Quarter

April-May-June : HM1 William Spatz, Biological Sciences Department
July-August-September : HM3 Kathleen A. Khoury, Environmental Physiology Department
October-November-December: HM2 William D. Whitney, Behavioral Psychopharmacology Department

Re-enlistment ceremonies were held on 4 March for HMCS Collins C. Milhouse and on 22 July for HM2 Paul H. McCormic.

Promotion ceremonies to their present rank were held on:

13 June for Commander Dennis P. Nelson, MSC, USN of the Biological Sciences Department and for HM3 Kathleen A. Khoury of the Environmental Physiology Department.

13 December for HM1 Joseph F. Burkard and HM3 Tracye L. Miner, of the Environmental Physiology Department.

Augmentations

Lieutenant R. Blake Chaffee, MSC, USN was augmented 31 March and Lieutenant Commander Charles G. Gray, MC, USN, on 18 July.

Frocking

HM1 William H. Spatz, of the Biological Sciences Department, was frocked to Chief Petty Officer on 15 September.

First Good Conduct Awards were presented on 17 February to HM2 William D. Whitney, Environmental Physiology Department, and to HM2 Richard Canavaciol, Biological Sciences Department.

Retirements

On 1 July, Lieutenant Commander John C. Ferguson, MSC, USN, Deputy Department Head of the Environmental Medicine Department, transferred to the Retired List, with 20 years and 7 months of Active Duty.

On 1 September, Commander Thomas E. Berghage, MSC, USN, Head of the Environmental Physiology Department, transferred to the Retired List, having completed 24 years and 8 months of Active Duty.

Navy Achievement Medal

In April 1983, LCDR Eric J. Mueller, MSC, USN, received the Navy Achievement Medal:

"...For sustained professional achievement in the superior performance of his duties during the period 15 September 1982 to 11 March 1983 while assigned duties as TAD Medical Service Corps Officer at Naval Regional Medical Center Oakland."

Command Career Counselor

HM1 Renato Reyles completed the U. S. Navy's Command Career Counselor Course at the Naval Training Center on September 30th and assumed all responsibilities concerning enlisted career matters. He is the first NHRC trained Enlisted Career Counselor.

Offices

Commander Thomas E. Berghage, MSC USN, was appointed to the Board of Directors of the Undersea Medical Society

Lieutenant Thomas F. Hilton, MSC USN was appointed Member of the Steering Committee, Society for the Advancement of Social Psychology, and Member of "Evaluation Network", a professional issues committee.

Letters of Appreciation/Commendation

The following letters were received during 1983:

APRIL: To : LCDR Eric J. Mueller, MSC, USN
From: RADM R. C. Elliott, MC, USN, Commanding Officer, Naval Regional Medical Center, Oakland, California
Subj: Letter of Commendation

"...For professional achievement in the superior performance of your duties as an integral member of the Navy Drug Screening Laboratory, Naval Regional Medical Center, Oakland, California, from approximately 13 September 1982 to 15 February 1983."

JUNE: To : LCDR Fred D. Glogower, MSC, USN, dated 21 June 1983
From: Commanding Officer, Naval Station, San Diego,
Subj: Letter of Commendation and Appreciation

"...outstanding performance of duty as Director Fleet Mental Health Unit, Naval Station, San Diego from September 1977 to August 1982. In addition, through working with the base chaplains developed, a Reserve Chaplain's training presentation, "The Unauthorized Absentee, A Profile" as a part of the nationwide Reserve Program "Ministry to Military Absentees and Their Families" hosted and conducted by Naval Station, San Diego."

SEPTEMBER: To : Lieutenant Michael R. Lawlor, MSC, USNR dated 22 September 1983
From: Commanding Officer, Naval Medical Clinics, San Diego
Subj: Letter of Appreciation

"...On 31 August 1983 LT Lawlor spoke to our Preventive Medicine Department's Behavioral Weight Control group on the various risks of obesity and the benefits of an exercise program in helping to control weight. ...He not only motivated some participants to begin their own exercise program, he also demonstrated a sound knowledge of the human body and cardio-vascular system. ...Presentations such as LT Lawlor's are an important contribution to the on-going success of the Behavioral Weight Control Program."

DECEMBER: To : HM1 Ike Khan dated 19 December 1983
From: Commanding Officer, USS George Philip (FFG-12)
Subj: Letter of Appreciation

"...Your diligence, dedication and genuine personal concern to promote good health and a sense of well being among the crew was instrumental in smooth implementation of the SPARTEN PROGRAM, ...your efforts as coordinator were essential to the success of the SPARTEN Program, ...you volunteered to embark aboard during our underway period and port visit to San Francisco from 23 May to 10 June,

...remarks by the Ship's Senior Medical Department Representative for your initiative to help with the chores of running the medical department."

Misc.

Ph.D. Degree. In April, LCDR James C. Helmkamp, MSC USN, received his Ph.D. in Epidemiology from the Graduate School of Public Health, University of Pittsburgh.

NHRC Report 83-18 "An Administrative Index for Mental Health Professionals" by B.G. McCaughey, R. B. Chaffee & F. A. Thompson. With so many regulations, Commander McCaughey felt there was a need for a convenient reference to help psychiatrists and mental health professionals and as a result has published a "first" for this type of index for the Navy. Letters of praise include:

From LT N. J. Harrington, JAGC, U. S. Navy, Office of the Judge Advocate General, Alexandria, Virginia, dated 18 November 1983:

"...one copy has been sent to the Naval Justice School for their use to be reproduced and distributed to their lawyer and legal officer students. The office of the Legal Assistance Policy Branch intends to publish it in their Legal Assistance Newsletter which is sent to each military legal assistance office, and submission for publication in the newsletter of the JAG Corps, Off The Record."

From J. F. McGrail, M.D., a former Navy officer, Chief, Department of Psychiatry, Memorial Hospital of Burlington County, Mount Holly, New Jersey, dated 1 November 1983:

"...You are to be congratulated on this outstanding practical research effort. I was always most interested in finding ways to organize, simplify and communicate various administrative policies, etc., so the Navy psychiatric clinician could spend the maximum amount of time practicing psychiatry, and the minimum amount of time looking up instructions, writing de novo Medical Boards, and redoing psychiatric reports improperly prepared at other facilities. Your indexes will be most useful in accomplishing this."

Commander Brian G. McCaughey, MC, USN, reported onboard 18 July 1982 and is Deputy Department Head of the Environmental Medicine Department.

Officer Indoctrination School (OIS). Lieutenant Ronald P. Crisman, MSC, USNR, on 13 May graduated from OIS School with distinction in academics and physical fitness. At that time he received from the Director, OIS, letters of commendation for Honor Graduate (graduated first in class), and for achievement of maximum grade in the physical fitness program; Associate membership in the U.S. Naval Institute; by direction of Chief of Naval Operations "1000 Point Aerobic Club" (achievement of 878 points beyond the minimum requirements); was elected Commanding Officer of OIS Company; and awarded "First Class Swimmer" for highest qualification in swimming tests.

SPORTS AWARDS (PHYSICAL FITNESS, ETC.)

Captain Lang presented NHRC's Physical Fitness Awards to Lieutenant Edward J. Marcinik, MSC, USN and Lieutenant Ronald P. Crisman, MSC, USNR, both from the Environmental Physiology Department, on 18 November.

Lieutenant Marcinik's physical fitness activities include:

- * 9 February - Bluejacket 10K briefing with RADM Stoecklein (Pet.), and Pete Elkins, Director of San Diego USO Chapter, USO Building, San Diego;

LT Marcinik, cont.

- * 9 February - Appointment as Head Coach of the Recruit Training Command Track Team, San Diego
- * 23 February - "1st Place Finish (age 30 Category), Swiftest Business 10K" (Naval Training Center Cross-Country Team)
- * 17 April - Assistant Race Supervisor, 4th Annual Muscular Dystrophy Association 10K
- * 7 May - Appointed Co-Director of Bluejacket 10K (to be run at Mission Bay Park)
- * 9 May - "1st Place Finish, Bluejacket 10K" (Head Coach & Participant, Recruit Training Command 10K Team)
- * 28 May - "1st Place Finish, San Onofre 10K", Camp Pendleton (Participant with NTC Cross-Country Team)
- * 18 June - "1st Place Finish (30-39 Age Group), Ocean Beach Pier 5K" (Participant)
- * 23 Nov - "2nd Place, North Island Thanksgiving 2-Mile Run"
- * 3 Dec - "1st Place, Military Division, San Onofre 10K", Camp Pendleton, (Head Coach and Participant, Naval Training Center Cross Country Team)
- * 10 Dec - "1st Place, Military Division, MCRD Half Marathon"

Bodybuilding Awards

On 12 February 1983, HM3 James Bucci entered the Mr. U. S. Armed Forces Bodybuilding Championships, held in San Diego. He placed "third" in the Heavyweight Division, and "first" for the All-Navy Bodybuilding Champion.

May 14 he entered the Mr. California Bodybuilding Championship (Medium Tall Division), held in Lakewood, California, and placed "fifth".

HM3 Bucci reported onboard 8 January 1981 and transferred 7 July 1983.



HM3 Bucci

HONORS AND AWARDS FOR THE CIVILIANS

Honors

Dr. Spinweber successfully passed the accreditation examination given by the Association of Sleep Disorder Centers. She is the Navy's first certified Clinical Polysomnographer.

Retirement(s)

On 11 March, Mrs. Ann Clay, Editorial Assistant in the Clinical Psychophysiology Department for 13 years, retired with 31 years of Federal Civil Service.

Appointments to Offices, National, State, Local Societies, etc.

Dr. Englund was appointed 19 September to the Committee on Human Factors and Engineering Psychology, Division 19 (Military Psychology) of the American Psychological Association.

Anne Hoiberg has been selected for inclusion in Who's Who of American Women, 1983, and has been invited to become a member of the American Association for the Advancement of Science. In addition, Anne was:

- * the Associate Chairperson for Inter-University Seminar on Armed Forces and Society;
- * Division 19 Representative for the Committee on Women in Psychology; and Division 19 Chairperson of the Ad Hoc Committee on Women and Minorities in the Military, of the American Psychological Association; and
- * NHRC (& NPRDC) Representative for the Women's Advisory Committee at Naval Ocean Systems Center.

Mary Aldous, NHRC Librarian, on 1 June, was Vice-Chair and Program Chairman of the Military Section of the Medical Library Committee. Her program included Milton McGee, FEDLINK Coordinator from the Library of Congress who spoke on the FEDLINK programs for military libraries.

Mrs. Aldous is also a member of the command's Safety Committee and attended the Navy Safety Workshop on 7 and 8 December.

Misc

Miss Hoiberg organized and hosted the APA Division 19 Breakfast Hour for APA Women at the Marriott Hotel on 27 August.

Dr. Hodgdon, by invitation, participated in the Department of Defense Symposium on Health Promotion held in June 1983 at the Sheraton International Hotel, Reston, Virginia. In July, he participated in a planning session for the military physical fitness symposium held in conjunction with the Olympic Scientific Congress in Eugene, Oregon and another planning session on 15 November at the Headquarters, U.S. Marine Corps, Washington, DC.

AWARDS presented on 17 February:

Length in NHRC Service:

Behavioral Psychopharmacology Department: Dr. Spinweber (5 years)

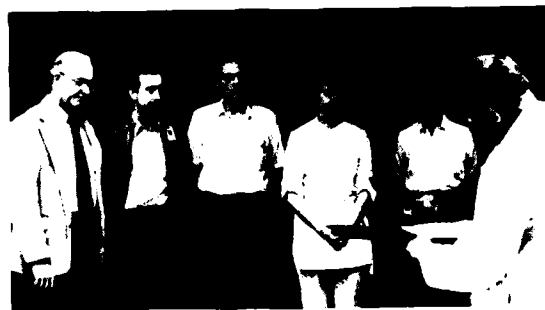
Length in Federal Service (years):

Matt Sinclair (10) and Dr. L. C. Johnson (30)
Behavioral Psychopharmacology Department

William Suiter (11), and Hope D. Chapple (20)
Biological Sciences Department

Frances Jackson (15)
Environmental Medicine Department

Richard Booth (15)
Health Psychology Department



Dr. Johnson | Richard Booth | Hope Chapple
Matt Sinclair | Fran Jackson



Dr. Spinweber Charmion McMillan

Quality Step Increases:

Marion Austin, Matt Sinclair and Dr. C. Spinweber
Behavioral Psychopharmacology Department

Hope D. Chapple and Charmion McMillan
Biological Sciences Department

Sustained Superior Performance Awards:

Ralph Garcia
Administrative Services Department

Raymond Hilbert
Research Support Department

William Pugh
Environmental Medicine

Brenda Crooks
Office of the Commanding Officer



William Pugh Ray Hilbert



Rena Paczowski Joyce Ford

Letters of Appreciation:

to Joyce Ford, Computer Aide,

to Rena Paczowski, Computer Aide.



(Picture received 9 May 1983). Anne Hoiberg receiving the Major Louis Livingston Seaman Prize from Vice Admiral J. William Cox, MC, USN, on 28 October 1982. This award is given by the Association of Military Surgeons of the United States, for the most notable paper "Cancer among Naval Personnel: Occupational Comparisons" NHRC Report No. 79-57, published Military Medicine, 1981, 146(8), 556-561.

1983 VISITORS *

(Date)	(Office/Person visited)
JANUARY	
13	Captain S. B. Lewis, MC, USN; Director, CIC, Naval Hospital, Oakland (CO & Dr. Gunderson)
24	Captain Pickett, Commanding Officer, Naval Medical Clinics Command, San Diego (W. Pugh)
17	Dr. Tony Sucec, Department of Physical Education, San Diego State University (Dr. Hodgdon)
FEBRUARY	
15	Lyn Henry, Vice President, Turner Designs - Luminescence (CDR Nelson)
28	Captain J. Senechal, MC, USN, Naval Medical Command, Washington, DC (OCO)
MARCH	
1	Lyn Henry, Vice President, Turner Designs Luminescence (CDR Nelson)
4	Commander Wiggin, MC, USN, USS Ranger (CV-61) (Dr. Hodgdon)
10-11	LCDR G. Banta, Naval Aerospace Medical Research Laboratory, Pensacola (OCO & Dr. Hodgdon)
10	Dr. Jon Wannlund, Research Director, Analytical Luminescence Labs - Bioluminescence (CDR Nelson)
15	Ann de Pister, Graduate Student, UC Berkeley (CDR Nelson)
21	Captain James Vorsmarti, MC, USN, Office of the Under Secretary of Defense for Research and Engineering (Command)
APRIL	
12	LCDR Bolshazy, Medical Administrative Officer, COMNAVSURFPAC (W. Pugh)
21	Commander Warren Schultz, Infectious Diseases Project Officer, DNR and Dr. William Griswold, Medical School (CDR Nelson)
MAY	
3-5	Captain Biersner, Commander Ashturn and ... Naval Medical Research and Development Command, Bethesda, MD (Command and Mr. Edwards)
5	Brigadier General Raef Rely and ... FPMH 05, San Diego--Captain Fred L. Baker, MC, USN, ... (Command and Mr. Edwards)
19	Bill Moto, President and ... Cincinnati, Ohio (Mr. Edwards)
JUNE	
9	Dr. Ward, Psychiatry Department ...
15	Dr. George Christoffersen, ... (Mr. Edwards)
29	Freda L. Paltiel, Senior Advisor, ... Welfare, Ottawa, Ontario, Canada (Mr. Edwards)
JULY	
14	LTJG R. Bachelor, MSC, USN, FPMH ...
15	Dr. M. W. Radomsky and Dr. ... Medicine (DCIEM), Toronto, Canada; Mr. Vincent ... (Dr. Naith)
18	LTC Franklin C. Pinch, Director, Personnel ... National Defence Headquarters, Ottawa, Ontario, Canada (Mr. Edwards)
19	LT Dennis Reeves, Naval Medical Research ...
21	Dr. Guidotti, School of Public Health, San Diego State University (Dr. Gunderson)
AUGUST	
4	COMNAVSURFPAC, San Diego, Captain D. ...; Captain ...; Commander R. S. Bolshazy, MSC USN (OCO re Survey of Medical Readiness Improvement)
8-11	Dr. Joseph Osterman, Director of Programs and Scientific Advisor, Naval Medical Research and Development Command, Bethesda (Command)
9-10	Dr. Michael Smolensky, Associate Professor, Environmental Physiology, School Public Health, University of Texas, Houston (Dr. Naith, host; presentation)

* Any omissions are purely unintentional.

August cont.

- 10 Dr. C. M. Winget, Research Scientist, Biomedical Research Division, NASA, Ames Research Center, Moffett Field, Calif. (Dr. Naitoh)
- LCDR Foreman, Naval Environmental Health Center, Norfolk (Dr. Gunderson)
- Professor D. C. Holley, Department of Biological Sciences, San Jose State University, San Jose, California (Dr. Naitoh)
- 18-19 Dr. Ward, Psychiatry Department, UCSD (Dr. Gunderson)
- 25 Dr. F. Fonnum, Division of Environmental Toxicology, Norwegian Defense Research Establishment, Kjeller, Norway (on research contract with Walter Reed Army Institute of Research, "The Effect of Sustained Military Activities on Performance Decrement and Endocrinological Changes in Man" -- Dr. Naitoh and Department)
- 25 Lcdr Wallace, NEPMU-6, Pearl Harbor Hawaii (Mr. Edwards & CDR Nelson)
- 29 Dr. H. Arito, National Institute of Industrial Health, Kawasaki-shi, Kanagawa, Japan (Dr. Naitoh)
- 30 Commander John F. Wyman, MSC, USN, Naval Medical Research Institute Toxicology Detachment, Wright Patterson AFB, Ohio (Dr. Gunderson & Dr. Garland)
- Major Gerald P. Kreuger, USA, Health Hazards of Military Systems and Combat Operations, U.S. Army Medical R&D Command, Fort Detrick, MD (Dr. Hodgdon)
- 31 Major Dennis Kowal, Office of Health Affairs, Department of Defense (Dr. Hodgdon)

SEPTEMBER

- 6 Lcdr John F. Wyman, MSC, USN, Naval Medical Research Institute Toxicology Detachment, Wright-Patterson Air Force Base, Ohio (Dr. Garland)
- 29 Dr. Arden Forrey, University Washington & Naval Medical R&D Command (CDR Nelson)
Commander Paul Bruder, MSC, USN, Administrative Officer, Naval Dental Clinic, Washington, DC (Dr. Hodgdon)
- 30 Dr. John Sipple, Commanding Officer, Naval Bioscience Laboratory, Oakland (CDR Nelson)

OCTOBER

- 3 Dr. Frank Borkat, Bioengineering Branch, Naval Ocean Systems Command (CDR Nelson)
- 5 Captain B. R. Blais, MC, USN, Director Surface/Sealift Medicine, DN, Naval Medical Command, Washington, DC (LT Marcinik)
- 11 Dr. Herbert Baker, Naval Personnel Research and Development Center (Anne Hoiberg)
- 13 Captain John Senechal, Naval Medical Command, Washington, DC (Dr. Hodgdon)
- 12-13 Captain R. D. McCullagh, MSC, USN, Administrative Officer, Naval Medical Research and Development Command, Bethesda (Command)
- 20 CDR Warran Sanborn, USN, retired (CDR Nelson)

Oct-Dec Dr. William Griswold, UCSD (CDR Nelson)

NOVEMBER

- 7 Dave Hall and Dr. Paul O. Davis, President, Institute of Human Performance, Langley Park, Maryland (Dr. Hodgdon)
- 7-11 R. J. Tomanek, Department of Anatomy, College of Medicine, University of Iowa (LT Crisman)
- 8 Michael H. Smolensky, Ph.D. Associate Professor, Environmental Physiology, School of Public Health, The University of Texas (Dr. Naitoh and Dr. Spinweber)
- 18 Professor Robert Hick, Department of Psychology, San Jose State University (Dr. Spinweber)

DECEMBER

- 3 Commander Fenton Carey, Member, CNO Executive Panel (LT Marcinik)
- 6 Dr. Costa, National Institute on Aging, Washington, DC (Command)
- 16 Dr. Tony Suced, Department of Physical Education, San Diego State University (Dr. Hodgdon)
CDR Dave Kelley, Parachute Systems Branch, Naval Weapons Center, China Lake (Dr. Hodgdon)
- 28 LT Robert E. Herten, MSC, USN, Aerospace Physiology Training Department, NAS Miramar, San Diego (Dr. Hodgdon)

ACKNOWLEDGEMENTS

Brenda Crooks compiled and provided editorial assistance for this report.

"Special thanks" to:

- * Berlinda Lopez, Larry Hermansen and Brenda Crooks for most of the photographs in this report;
- * Commander Loos and Commander Wood for proofreading assistance, and
- * Lucile Cheng for the preparation of the report cover, for this year (and past years).



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